



**UNDERGROUND STORAGE TANK
CLOSURE AND SITE
INVESTIGATION REPORT
ORTHO DIAGNOSTIC SYSTEMS, INC.
1001 ROUTE 202 NORTH
RARITAN, NEW JERSEY**

TMS No. C97-0320
UST Facility No. 00058827
Spill Case No. 97-6-11-1045-58

Prepared for:
Ortho Diagnostic Systems, Inc.
1001 Route 202 North
Raritan, NJ

Prepared by:

McLaren/Hart, Inc.
25 Independence Blvd.
Warren, New Jersey 07059

August 1997

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for incomplete information, including fines and/or imprisonment.

Paul Corbett

Paul Corbett, P.G.
Certification # 0010221



NJD 068 715 424

13F

**UNDERGROUND STORAGE TANK
CLOSURE AND SITE
INVESTIGATION REPORT
ORTHO DIAGNOSTIC SYSTEMS, INC.
1001 ROUTE 202 NORTH
RARITAN, NEW JERSEY**

TMS No. C97-0320
UST Facility No. 00058827
Spill Case No. 97-6-11-1045-58

Prepared for:
Ortho Diagnostic Systems, Inc.
1001 Route 202 North
Raritan, NJ

Prepared by:

McLaren/Hart, Inc.
25 Independence Blvd.
Warren, New Jersey 07059

August 1997

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for incomplete information, including fines and/or imprisonment.


Paul Corbett, P.G.
Certification # 0010221

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.0	INTRODUCTION	1-1
1.1	Site Location and Description	1-2
1.2	Historical Information	1-5
1.3	Physical Setting	1-5
2.0	SITE INVESTIGATION ACTIVITIES	2-1
2.1	Scope of Work	2-1
2.2	Sampling of UST Contents	2-1
2.3	Tank Removal	2-2
2.4	Impacted Soil Removal	2-2
2.5	Sampling Procedures and Protocol	2-3
2.6	Significant Events	2-4
3.0	FINDINGS/RECOMMENDATIONS	3-1
3.1	Characterization of UST Contents	3-1
3.2	Condition of UST	3-1
3.3	Post-Excavation Soil Sampling Results	3-5
3.4	Reliability of Laboratory Analytical Data	3-5
3.5	Recommendations	3-5

LIST OF FIGURES

<u>Figure No.</u>	<u>Title</u>	<u>Page</u>
1	Site Location Map	1-3
2	Approximate Location of Underground Storage Tank	1-4
3	Soil Sample Location Map	2-5

LIST OF TABLES

<u>Table No.</u>	<u>Title</u>	<u>Page</u>
1	Analytical Results for Underground Storage Tank Sludge Sample	3-2
2	Analytical Results for Underground Storage Tank Aqueous Sample	3-4
3	VOC Analytical Results for Post-Excavation Soil Samples	3-6
4	Semi-VOC Analytical Results for Post-Excavation Soil Samples	3-8
5	TPH Analytical Results for Post-Excavation Soil Samples	3-10

LIST OF APPENDICES

APPENDIX	TITLE
I	UST Closure Plan Approval Application Package
II	NJDEP UST System Closure Approval
III	Local Building and Construction Permits
IV	Underground Storage Tank Facility Questionnaire
V	Site Investigation/Remedial Investigation Report Checklist
VI	QA/QC and Chain of Custody
VII	UST Removal Photograph Log
VIII	Tank Disposal Affidavit
IX	Analytical Results Reports

1.0 INTRODUCTION

This report details the activities and findings associated with the closure of a 10,000 gallon underground storage tank (UST) at the Ortho Diagnostic Systems, Inc. (ODSI) facility located in Raritan, New Jersey. The 10,000 gallon waste solvent UST was discovered in April 1997 during the Resource Conservation Recovery Act (RCRA) Facility Investigation (RFI) of Solid Waste Management Unit (SWMU) 8, the Southwest Leach Field. Upon discovery of the UST, the size of the UST was unknown and assumed to have an estimated capacity of 12,000 gallons. Upon excavation and removal of the tank, the tank capacity was found to be approximately 10,000 gallons. Initial permits relating to the tank, which are found in Appendices I, II, and III, indicate a capacity of 12,000 gallons. Subsequent documentation of the UST indicates a capacity of 10,000 gallons. The 10,000 gallon UST was removed on June 10, 1997.

ODSI contracted Laidlaw Environmental Services (Laidlaw) to perform technical oversight of closure activities. Removal and demolition of the 10,000 gallon UST was conducted by Casie/Protank (Casie) [UST Certification # US00054], who was subcontracted by Laidlaw. Oversight of closure activities and site assessment were performed by Mr. Paul Corbett (UST Certification # 0010221) of McLaren/Hart. This site assessment consisted of visual observations, field screening, and laboratory analysis of post-excavation soil samples.

This report includes the following sections: Introduction, Site Investigation Activities, and Findings/Recommendations. The introduction discusses the site location and description, historical information, and physical setting of the site. Section 2.0 discusses the scope of work, sampling of the UST and post-excavation sampling, UST and impacted soil removal and any significant events that occurred during the UST removal. Section 3.0 discusses the analytical results of the UST contents and post-excavation samples, the condition of the UST, and the reliability of laboratory analytical data, and recommendations.

The UST Closure Plan Approval Application (Appendix I) was filed prior to the removal of the tank. McLaren/Hart received the UST System Closure Approval notice (Appendix II) from NJDEP, dated May 6, 1997, for tank removal. Local building and construction permits (Appendix III) were obtained prior to the start of field operations. The Underground Storage Tank Facility Questionnaire (Appendix IV) and Site Investigation/Remedial Investigation Report Checklist (Appendix V) are also provided. The Quality Assurance/Quality Control (QA/QC) review and Chain of Custody (Appendix VI) for the post-excavation sampling are included. A photographic log documenting the UST removal is included in Appendix VII, and the certificate of tank disposal are included in Appendix VIII. Finally, the analytical results report provided by the laboratory is included in Appendix IX.

1.1 SITE LOCATION AND DESCRIPTION

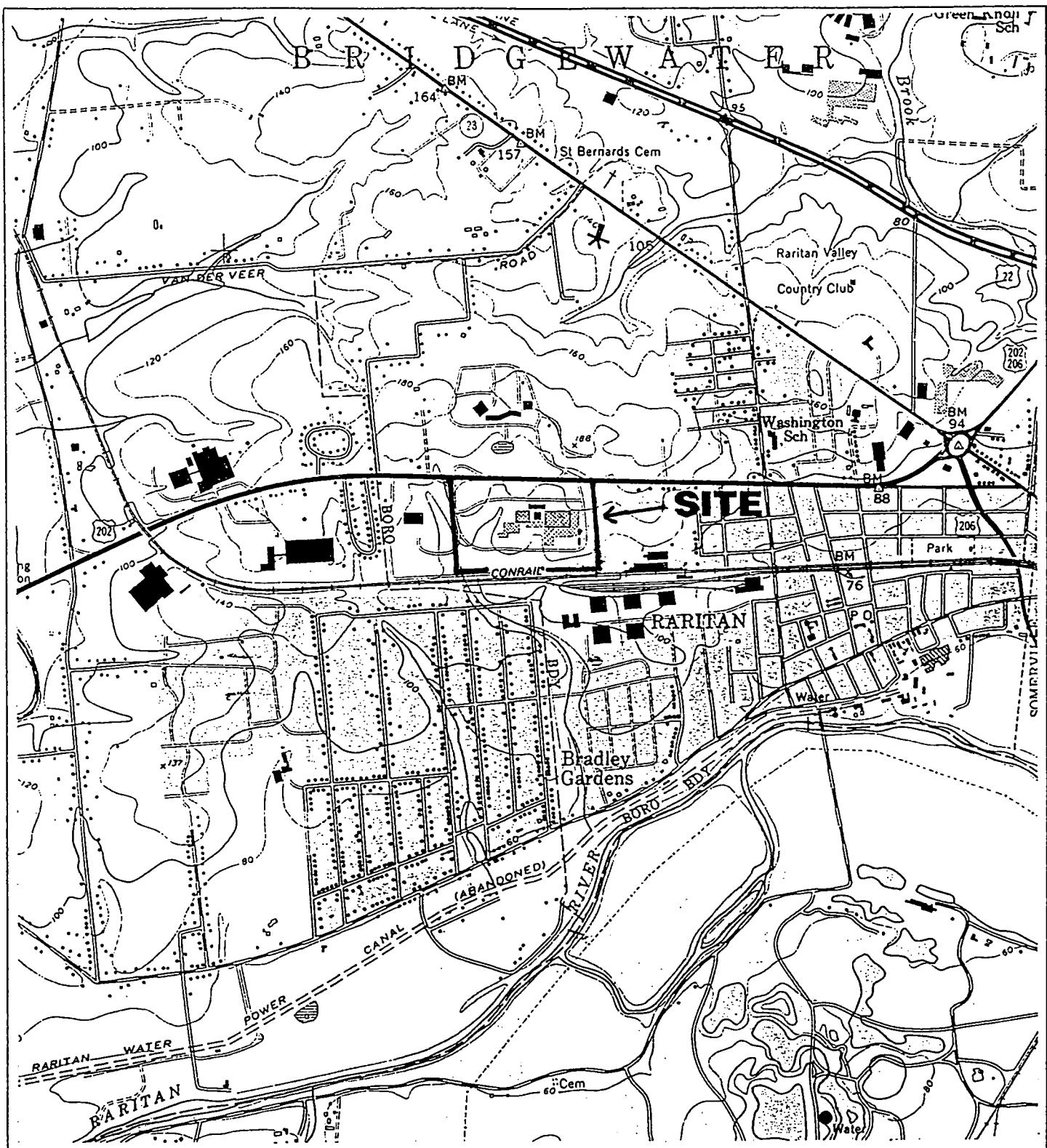
Ortho Diagnostic Systems, Inc.

1001 Route 202 North

Raritan, New Jersey 08869

Facility ID # 0058827

The facility is located in the Borough of Raritan, New Jersey, south of the intersection of Route 202 and Route 206 at Block 31 and Lot 4 (Figure 1). The facility is bounded to the North by Route 202, the South by a New Jersey Transit Maintenance facility and railroad tracks, the East by the North American Products facility and residential property, and the West by the Johnson & Johnson NCS facility. The facility occupies 66 acres; 16 acres are paved parking areas, 43 acres are lawn areas, and 7 acres are occupied by buildings. The site surface relief is relatively flat with a slight slope to the South. The UST was located in the southwest area of the site in the parking lot in the immediate vicinity of the Southwest Leach Field (Figure 2).



SOURCE: 7.5' SERIES USGS QUADRANGLE (RARITAN, N.J.)

FIGURE 1

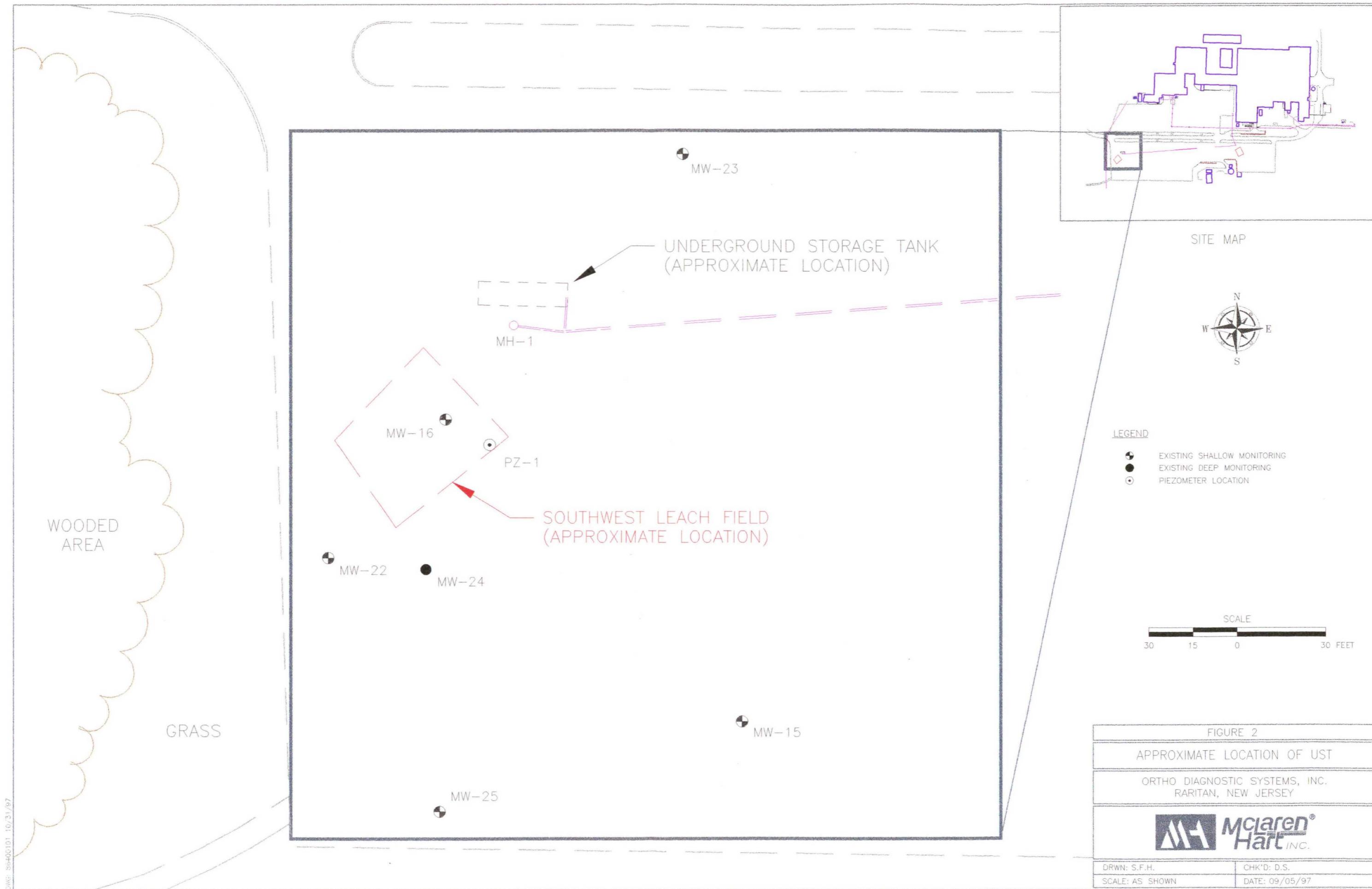
SITE LOCATION MAP

ORTHO DIAGNOSTIC SYSTEMS INC.
RARITAN, NEW JERSEY



DRWG: 75500108 07/24/97

QUADRANGLE LOCATION
SCALE: 1" = 2000'



1.2 HISTORICAL INFORMATION

This report does not include historical information since the remediation was directed at an underground storage tank, pursuant to N.J.A.C. 7:26E-3.13 (b)1.

1.3 PHYSICAL SETTING

This report does not include the physical setting section since the remediation was directed at an underground storage tank, pursuant to N.J.A.C. 7:26E-3.13 (b)2.

2.0 SITE INVESTIGATION ACTIVITIES

The following sections discuss the activities involving the excavation and removal of the 10,000 gallon waste solvent UST including sampling of the UST, removal of the UST and impacted soil, and post-excavation sampling.

2.1 SCOPE OF WORK

The scope of work for the removal of the UST entailed the following:

- Analysis of the contents of the UST to determine the nature of the material;
- Acquisition of the NJDEP UST Closure Approval permits (Appendices I, II, and III);
- Excavation and removal of the UST from the ground;
- Cleaning and disposal of the UST;
- Disposal of the UST contents;
- Removal of the UST from the site;
- Collection of post-excavation soil samples to be analyzed for volatile organics (PP VO+10), Total Petroleum Hydrocarbons (TPH), and 25% of the total samples exhibiting the highest detections of TPH to be analyzed for semi-volatiles (PP BN+15);
- Additional removal of impacted soil;
- Returning excavation to original grade and state with new clean fill;
- Completion of the appropriate forms and checklists for submission to the NJDEP (Appendices IV and V).

2.2 SAMPLING OF UST CONTENTS

Due to the unknown nature of the material contained within the UST, a sample was taken from the liquid and sludge of the UST prior to the removal of the UST. The liquid sample was analyzed for PP VO+10 while the sludge sample was analyzed for full Toxic Characteristic Leaching Process (TCLP) for RCRA Characteristics, Polychlorinated Biphenyls (PCBs), TPH, Karl Fisher Titration -

H₂O, PP VO+10 and PP BN+15. The results were provided to Laidlaw to determine the waste classification of the material for proper disposal. All samples were analyzed in accordance with N.J.A.C. 7:26E-2.

2.3 TANK REMOVAL

Closure activities commenced with the excavation of overburden material above the tank to expose the top of the tank. Located on the top of the tank was a standpipe on each end of the tank and a manway in the middle of the tank. A Photoionization Detector (PID) was used by McLaren/Hart during the excavation activities to monitor the work area for Health and Safety. Upon opening the standpipes, free standing liquid was pumped out of the tank into a vacuum tanker. The exhaust from the tanker was connected to 3 carbon drums connected in parallel to eliminate the discharge of emissions to the atmosphere. Upon opening the manway, there was evidence that the tank was backfilled with what appeared to be native soil and was abandoned-in-place. The tank was cut open with an air chisel to prevent sparking, and the contents of the tank were removed using an excavator. Liquid with floating free product was routinely vacuumed out of the tank since it continued to leach in the tank while the contents of the tank were placed in closed sludge boxes to be transported to Deer Park, Texas for incineration. The detection of free product in the excavation was reported to the NJDEP Spill Hotline and assigned Case No. 97-6-11-1045-58.

Once the contents of the tank were excavated, the tank was removed and staged on 6-mil polyethylene plastic. Upon removing the tank, it was evident that the tank was secured to a concrete pad via tie downs. The tank was cleaned by Casie by scraping the contents off the sides. Refer to Section 3.2 for a discussion of the condition of the UST. The tank was inspected by the Borough of Raritan Building Inspector, Mr. Bob Bittle, and removed from the site by Casie (Appendix VIII).

2.4 IMPACTED SOIL REMOVAL

Upon removal of the tank, additional excavation was performed, to the extent practical, to remove

the impacted soils. The soil was placed into closed sludge boxes. The excavation was squared to what was thought to be the original perimeter of the excavation. Material was excavated above the concrete pad with a smooth bucket, to the extent practical. The west end of the concrete pad was excavated to the depth of the pad to determine if free product leached around the pad. The sides of the excavation were excavated to rock. The resulting size of the excavation was 38' x 20.5' x 12'. McLaren/Hart personnel monitored the excavated rock with a PID and found that the moisture on the rock (i.e., water in the fractures of the rock) appeared to be the source of the elevated readings. McLaren/Hart personnel did not consider it to be practical to excavate further since there was no evidence of free product.

Post-excavation soil sampling commenced after the impacted soil was removed. Procedures and results are detailed in Sections 2.5 and 3.3, respectively.

To ensure free product was removed, McLaren/Hart recommended the installation of a 6 inch PVC pipe with slots at the west end of the excavation so that observations could be made of the water and/or product in the pipe. Approximately five feet of 2 ½ inch clean stone was placed immediately surrounding the pipe. The excavation was backfilled to approximately 3 feet with ¾ inch clean stone to handle the perched water. Geotextile fabric was laid over the stone to prevent fines and comingling of stone and soil. Certified clean fill was then placed atop the fabric in 8 to 12 inch lifts and compacted with a Ram-ex for each lift to ensure minimal settling. Finally, approximately 3 feet of ¾ inch clean road stone was placed and compacted atop the fill to return the elevation of the excavation to final grade.

2.5 SAMPLING PROCEDURES AND PROTOCOL

The sampling of the excavation was conducted in accordance with NJDEP UST System Closure Approval (TMS # C97-0320) and N.J.A.C. 7:26E-3.9(3). The technical regulations called for eight (8) soil samples (PX-1 through PX-8) to be collected and analyzed for Priority Pollutant (PP) Volatile Organics (VO+10) and Total Petroleum Hydrocarbons (TPH) (with further analysis of Base Neutrals

(PP BN +15) for 25% of the samples exhibiting the highest detection of TPH). Field sampling locations are included (Figure 3).

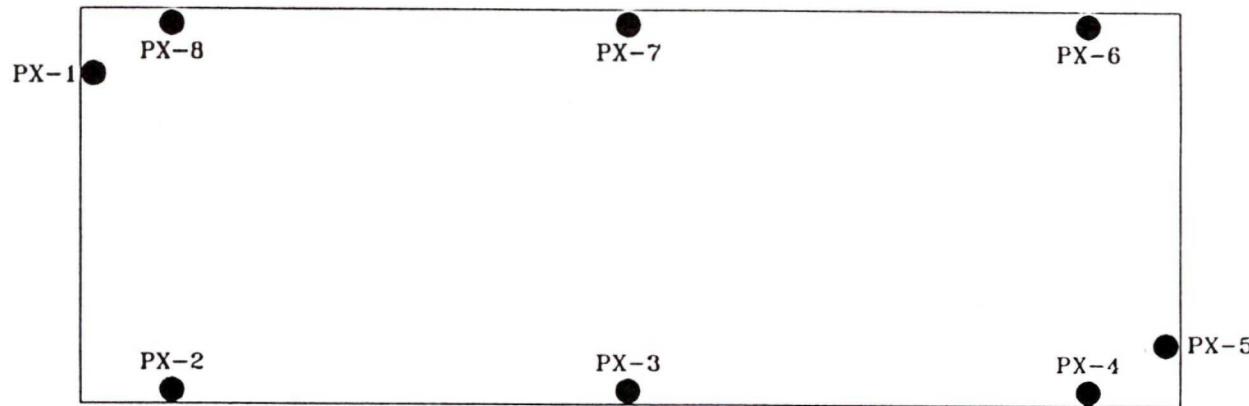
Eight soil samples were collected from the excavation at depths ranging from 4 to 6 feet below grade on the side walls of the excavation. The samples were taken at the deepest points where a representative soil sample could be achieved. The geology below this depth prohibited samples from being taken because of the presence of weathered shale. Also, monitoring the excavated weathered shale with a PID indicated that the moisture on the rock (i.e., water in the fractures of the rock) appeared to be the source of the elevated readings. The presence of a concrete pad prohibited McLaren/Hart personnel from obtaining soil samples below the tank.

The samples were placed in laboratory-cleaned glass jars, sealed with Teflon lids, and labeled. All samples were packed on ice for delivery to a New Jersey certified laboratory. The samples were shipped in accordance with chain of custody procedures (Appendix VI).

The samples were analyzed within NJDEP holding times and were analyzed in accordance with N.J.A.C. 7:26E. The QA/QC review is provided in Appendix VI.

2.6 SIGNIFICANT EVENTS

No significant events (i.e., weather) occurred which influenced the sampling procedures or analytical results. However, because of the shallow depth to bedrock in the vicinity of the UST (as discussed in Section 2.5), samples were taken from the perimeter of the excavation at the soil horizon immediately above bedrock. McLaren/Hart confirmed this method of sampling in conversations with Mr. Henry Schuver from the EPA on Tuesday, 10 June 1997 and Mr. Rodger Fedak from the NJDEP on Wednesday, 11 June 1997, prior to post-excavation sampling.

LEGEND

● SAMPLING LOCATIONS

Sample Specifications

Sample ID	Lab Sample ID	Sample Depth (ft.)	PID at Sample Depth (ppm)	PID at Base Above Slab (ppm)
PX-1	96866	4.0	3.0	120.0
PX-2	96867	5.0	2.0	100.0
PX-3	96868	5.0	0.5	—
PX-4	96869	5.0	0.5	60.0
PX-5	96870	5.0	0.5	80.0
PX-6	96871	6.0	0.0	—
PX-7	96872	5.0	1.0	—
PX-8	96872	4.0	1.0	200.0

NOTE: Sample Locations are approximate.

FIGURE 3

SOIL SAMPLE LOCATION MAP

ORTHO DIAGNOSTIC SYSTEMS INC.
RARITAN, NEW JERSEY



DRWN: D.L.S.

CHK'D: P.C.

SCALE: NONE

DATE: 8/22/97

3.0 FINDINGS/RECOMMENDATIONS

In summary, the results of the Site Assessment for the 10,000 gallon waste solvent tank indicated evidence of leakage resulting from corrosion of the tank. Remedial excavation of the impacted soil was continued until there was no visual or monitored PID volatile organic constituents detected. Excavation of the rock would have been infeasible since the source was the moisture on the rock (i.e., perched water found in fractures of the rock). The vertical extent of the excavation was limited by the existence of a concrete pad located below the location of the tank. The concrete pad was not visibly stained, and there was no evidence of free product below the pad from further excavation at the west end of the pad. Photographs of the UST removal and closure activities are provided in Appendix VII.

3.1 CHARACTERIZATION OF UST CONTENTS

Results obtained from the samples of the UST contents indicate that the UST material was subsequently determined to be waste solvents (Tables 1 and 2). The principal VOCs detected were methylene chloride, acetone, trichlorofluoromethane, chloroform, trichloroethene, benzene, tetrachloroethene, toluene, ethylbenzene, and xylenes. The only two semi-volatile organic compounds detected were naphthalene and bis(2-ethylhexyl)phthalate.

3.2 CONDITION OF UST

The tank was visibly pitted and corroded at the west end seam of the tank and on the surface. Holes up to the size of a quarter were also evident. Refer to Appendix VII for photographs supporting these observations.

TABLE 1
Analytical Results for Underground Storage Tank Sludge Sample
Ortho Diagnostic Systems Inc.
Raritan, New Jersey

Sample ID	UST-Sldg
Lab Sample ID	91752
Sample Date	5/14/97
Sample Depth	—
Matrix:	Sludge

VOLATILE ORGANIC COMPOUNDS (PPB)

Chloromethane	ND/ 73,000
Bromomethane	ND/ 73,000
Vinyl Chloride	ND/ 73,000
Chloroethane	ND/ 73,000
Methylene Chloride	2,100,000 Q
Acetone	460,000 Q
Trichlorofluoromethane	790,000 Q
1,1-Dichloroethene	ND/ 73,000
1,1-Dichloroethane	ND/ 73,000
trans 1-2 dichloroethene	ND/ 73,000
cis 1-2 dichloroethene	ND/ 73,000
Chloroform	1,100,000 Q
1,2-Dichloroethane	ND/ 73,000
1,1,1-Trichloroethane	ND/ 73,000
Carbon Tetrachloride	ND/ 73,000
Bromodichloromethane	ND/ 73,000
1,2-Dichloropropane	ND/ 73,000
cis-1,3-Dichloropropene	ND/ 73,000
Trichloroethene	330,000 Q
Dibromochloromethane	ND/ 73,000
1,1,2-Trichloroethane	ND/ 73,000
Benzene	7,600,000 Q
trans-1,3-Dichloropropene	ND/ 73,000
2-Chloroethylvinylether	ND/ 73,000
Bromoform	ND/ 73,000
Tetrachloroethene	67,000 JQ
1,1,2,2-Tetrachloroethane	ND/ 73,000
Toluene	950,000 Q
Chlorobenzene	ND/ 73,000
Ethylbenzene	110,000 Q
Xylene (Total)	850,000 Q

Total Targeted VOC Conc.	14,357,000
Total Number of TICs	14
Total Estimated Conc. TICs	14,160,000

Total VOC and TICs Conc.	28,517,000
--------------------------	------------

Laboratory: Envirotech Research, Inc. (NJ Certification No. 12543)

ND: Not detected

TIC: Tentatively Identified Compounds

All TIC concentrations are estimates

J : Estimated value at or below the reporting limit.

VOC : Volatile Organic Compound

Q: Estimated concentration based on QA/QC review.

Bold Outline: Indicates concentrations exceeding NJDEP Criteria

TABLE 1
Analytical Results for Underground Storage Tank Sludge Sample
Ortho Diagnostic Systems Inc.
Raritan, New Jersey

Sample ID	UST-Sldg
Lab Sample ID	91752
Sample Date	5/14/97
Sample Depth	--
Matrix:	Sludge

SEMI-VOLATILE ORGANIC COMPOUNDS (PPB)

Phenol	ND/ 24,000
2-Chlorophenol	ND/ 24,000
2-Nitrophenol	ND/ 24,000
2,4-Dimethylphenol	ND/ 24,000
2,4-Dichlorophenol	ND/ 24,000
4-Chloro-3-methylphenol	ND/ 24,000
2,4,6-Trichlorophenol	ND/ 24,000
2,4-Dinitrophenol	ND/ 48,000
4-Nitrophenol	ND/ 48,000
4,6-Dinitro-2-methylphenol	ND/ 48,000
Pentachlorophenol	ND/ 48,000
N-Nitrosodimethylamine	ND/ 24,000
bis(2-Chloroethyl)ether	ND/ 24,000
1,3-Dichlorobenzene	ND/ 24,000
1,4-Dichlorobenzene	ND/ 24,000
1,2-Dichlorobenzene	ND/ 24,000
bis(2-chloroisopropyl)ether	ND/ 24,000
N-Nitroso-di-n-propylamine	ND/ 24,000
Hexachloroethane	ND/ 24,000
Nitrobenzene	ND/ 24,000
Isophorone	ND/ 24,000
bis(2-Chloroethoxy)methane	ND/ 24,000
1,2,4-Trichlorobenzene	ND/ 24,000
Naphthalene	28,000
Hexachlorobutadiene	ND/ 24,000
Hexachlorocyclopentadiene	ND/ 24,000
2-Chloronaphthalene	ND/ 24,000
Dimethylphthalate	ND/ 24,000
Acenaphthylene	ND/ 1,200
2,6-Dinitrotoluene	ND/ 24,000
Acenaphthene	ND/ 1,200
2,4-Dinitrotoluene	ND/ 24,000
Diethylphthalate	ND/ 24,000
4-Chlorophenyl-phenylether	ND/ 24,000
Fluorene	ND/ 1,200

Sample ID	UST-Sldg
Lab Sample ID	91752
Sample Date	5/14/97
Sample Depth	--
Matrix:	Sludge

SEMI-VOLATILE ORGANIC COMPOUNDS (PPB)

N-Nitrosodiphenylamine	ND/ 24,000
4-Bromophenyl-phenylether	ND/ 24,000
Hexachlorobenzene	ND/ 24,000
Phenanthrene	ND/ 1,200
Anthracene	ND/ 1,200
Di-n-butylphthalate	ND/ 24,000
Fluoranthene	ND/ 1,200
Pyrene	ND/ 1,200
Benzidine	ND/ 48,000
Butylbenzylphthalate	ND/ 24,000
3,3'-Dichlorobenzidine	ND/ 48,000
Benzo(a)anthracene	ND/ 1,200
Chrysene	ND/ 1,200
bis(2-Ethylhexyl)phthalate	21,000 J
Di-n-octylphthalate	ND/ 24,000
Benzo(b)fluoranthene	ND/ 1,200
Benzo(k)fluoranthene	ND/ 1,200
Benzo(a)pyrene	ND/ 1,200
Indeno(1,2,3-cd)pyrene	ND/ 1,200
Dibenz(a,h)anthracene	ND/ 1,200
Benzo(g,h,i)perylene	ND/ 1,200

Total Targeted S-VOC Conc.	49,000
Total Number of TICS	25
Total Estimated Conc. TICs	5,036,000

Total S-VOC and TIC Conc.	5,085,000
---------------------------	-----------

ND: Not Detected

J : Estimated value at or below the reporting limit.

TIC : Tentatively Identified Compound

All TIC concentrations are estimates.

S-VOC: Semi-volatile organic compounds

Bold Outline: Indicates concentrations exceeding NJDEP Criteria

Laboratory: Envirotech Research, Inc. (NJ Certification No. 12543)

TABLE 2
Analytical Results for Underground Storage Tank Aqueous Sample
Ortho Diagnostic Systems Inc.
Raritan, New Jersey

Sample ID:	UST-AQ
Lab Sample ID:	91751
Sample Date	5/14/97
Sample Depth (ft.)	-
Matrix:	Liquid Sample

VOLATILE ORGANIC COMPOUNDS (PPB)

Chloromethane	ND/ 9,300
Bromomethane	ND/ 2,700
Vinyl Chloride	ND/ 3,900
Chloroethane	ND/ 10,000
Methylene Chloride	910,000
Acetone	320,000
Trichlorofluoromethane	5,200
1,1-Dichloroethene	ND/ 5,500
1,1-Dichloroethane	ND/ 3,100
trans 1-2 dichloroethene	ND/ 3,000
cis 1-2 dichloroethene	ND/ 10,000
Chloroform	110,000
1,2-Dichloroethane	ND/ 2,200
1,1,1-Trichloroethane	ND/ 2,000
Carbon Tetrachloride	ND/ 1,600
Bromodichloromethane	ND/ 1,900
1,2-Dichloropropane	ND/ 4,600
cis-1,3-Dichloropropene	ND/ 3,300
Trichloroethene	ND/ 4,100
Dibromochloromethane	ND/ 2,300
1,1,2-Trichloroethane	ND/ 4,300
Benzene	270,000
trans-1,3-Dichloropropene	ND/ 3,100
2-Chloroethylvinylether	ND/ 4,600
Bromoform	ND/ 3,000
Tetrachloroethene	ND/ 1,000
1,1,2,2-Tetrachloroethane	ND/ 3,300
Toluene	11,000
Chlorobenzene	ND/ 1,400
Ethylbenzene	ND/ 2,400
Xylene (Total)	ND/ 10,000

Total Targeted VOC Conc.	1,626,200
Total Number of TICs	0
Total Concentration of TICs	0
Total VOC and TIC Conc.	1,626,200

Laboratory: Envirotech Research, Inc. (NJ Certification No. 12543)

ND : Not Detected

-: Not applicable

TICS : Tentatively Identified Compounds

All TIC concentrations are estimates

VOC : Volatile Organic Compound

Bold Outline: Indicates concentrations exceeding NJDEP Criteria

3.3 POST-EXCAVATION SOIL SAMPLING RESULTS

Envirotech Research, Inc. (Envirotech) in Edison, New Jersey (Certification # 12543), performed the analyses of all of the samples in accordance with chain of custody procedures. Complete analytical reports are available in Appendix IX with QA/QC backup in Appendix VI.

Eight post-excavation soil samples were taken (PX-1 through PX-8) and analyzed for PP VO+10 and TPH. Two (2) samples exhibiting the highest detection of TPH were analyzed for PP BN+15. A summary of the soil sample results is provided (Table 3 through Table 5). All results are below the NJDEP Soil Cleanup Criteria.

3.4 RELIABILITY OF LABORATORY ANALYTICAL DATA

Soil sample collection, identification, and chain of custody procedures were performed in accordance with the NJDEP Field Sampling Procedures Manual dated May 1992 and N.J.A.C. 7:26E-3.9(3) dated March 1997. These procedures were used to ensure sample integrity and to document possession of the samples.

3.5 RECOMMENDATIONS

Based on field observations (i.e., condition of the UST) and the analytical results of the UST contents, McLaren/Hart recommends a groundwater investigation as part of the RFI of the site. In addition, McLaren/Hart has periodically monitored the former excavation for free product since the removal of the UST, but there has been no indication of free product.

TABLE 3
VOC Analytical Results for Post-Excavation Soil Samples
Ortho Diagnostic Systems Inc.
Raritan, New Jersey

Sample ID:	PX-1	PX-2	PX-3	PX-4	NJDEP SOIL CLEANUP CRITERIA (7/11/96) (PPB)		
Lab Sample ID:	96866	96867	96868	96869			
Sample Date	6/11/97	6/11/97	6/11/97	6/11/97			
Sample Depth (ft.)	4.0	5.0	5.0	5.5	RES	NON RES	GW
Matrix:	Soil	Soil	Soil	Soil			

VOLATILE ORGANIC COMPOUNDS (PPB)

Chloromethane	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	520,000	1,000,000	10,000
Bromomethane	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	79,000	1,000,000	1,000
Vinyl Chloride	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	2,000	7,000	10,000
Chloroethane	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	NS	NS	NS
Methylene Chloride	U/ 400	U/ 280	U/ 22	28 Q	49,000	210,000	1,000
Acetone	ND/ 700	ND/ 700	18	19	1,000,000	1,000,000	100,000
Trichlorofluoromethane	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	NS	NS	NS
1,1-Dichloroethene	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	8,000	150,000	10,000
1,1-Dichloroethane	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	570,000	1,000,000	10,000
trans-1,2-Dichloroethene	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	1,000,000	1,000,000	50,000
cis-1,2-Dichloroethene	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	79,000	1,000,000	1,000
Chloroform	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	19,000	28,000	1,000
1,2-Dichloroethane	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	6,000	24,000	1,000
1,1,1-Trichloroethane	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	210,000	1,000,000	50,000
Carbon Tetrachloride	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	2,000	4,000	1,000
Bromodichloromethane	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	11,000	46,000	1,000
1,2-Dichloropropane	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	10,000	43,000	NS
cis-1,3-Dichloropropene	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	**	**	**
Trichloroethene	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	23,000	54,000	1,000
Dibromochloromethane	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	110,000	1,000,000	1,000
1,1,2-Trichloroethane	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	22,000	420,000	1,000
Benzene	280	ND/ 140	0.8 J	ND/ 1.2	3,000	13,000	1,000
trans-1,3-Dichloropropene	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	**	**	**
2-Chloroethyl Vinyl Ether	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	NS	NS	NS
Bromoform	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	86,000	370,000	1,000
Tetrachloroethene	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	4,000	6,000	1,000
1,1,2,2-Tetrachloroethane	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	34,000	70,000	1,000
Toluene	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	1,000,000	1,000,000	500,000
Chlorobenzene	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	37,000	680,000	1,000
Ethylbenzene	ND/ 140	ND/ 140	ND/ 1.1	ND/ 1.2	1,000,000	1,000,000	100,000
Xylene (Total)	ND/ 140	150	ND/ 1.1	ND/ 1.2	410,000	1,000,000	10,000

Total Targeted VOC Conc.	280	150	18.8	47	NS
Total Number of TICs	10	10	1	1	NS
Total Concentration of TICs	20,860	23,000	20	28	NS
Total VOC and TIC Conc.	21,140	23,150	39	75	1,000,000

Laboratory : Envirotech Research, Inc. (NJ Certification No. 12543)

ND : Not Detected

NS: Not Specified

J : Estimated value at or below the reporting limit.

U: Concentration considered as ND due to blank contamination, based on QA/QC review.

Q: Estimated concentration based on QA/QC review.

TICS : Tentatively Identified Compounds

All TIC concentrations are estimates

VOC : Volatile Organic Compound

RES : Residential Direct Contact Soil Cleanup Criteria

NON-RES : Non-Residential Direct Contact Soil Cleanup Criteria

GW : Impact to Groundwater Soil Cleanup Criteria

**: Cleanup Criteria for cis- and trans- 1,3-Dichloropropene are as follows:

Residential: 4,000; Non-Residential 5,000; Groundwater 1,000

TABLE 3
VOC Analytical Results for Post-Excavation Soil Samples
Ortho Diagnostic Systems Inc.
Raritan, New Jersey

Sample ID:	PX-5	PX-6	PX-7	PX-8	NJDEP SOIL CLEANUP CRITERIA (7/11/96) (PPB)		
Lab Sample ID:	96870	96871	96872	96873			
Sample Date:	6/11/97	6/11/97	6/11/97	6/11/97			
Sample Depth (ft.)	5.0	6.0	5.0	4.0			
Matrix:	Soil	Soil	Soil	Soil	RES	NON RES	GW

VOLATILE ORGANIC COMPOUNDS (PPB)

Chloromethane	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	520,000	1,000,000	10,000
Bromomethane	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	79,000	1,000,000	1,000
Vinyl Chloride	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	2,000	7,000	10,000
Chloroethane	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	NS	NS	NS
Methylene Chloride	27 Q	U/ 21	24 Q	52 Q	49,000	210,000	1,000
Acetone	15	13	13	14	1,000,000	1,000,000	100,000
Trichlorofluoromethane	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	NS	NS	NS
1,1-Dichloroethene	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	8,000	150,000	10,000
1,1-Dichloroethane	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	570,000	1,000,000	10,000
trans-1,2-Dichloroethene	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	1,000,000	1,000,000	50,000
cis-1,2-Dichloroethene	ND/ 1.1	ND/ 1.1	0.7 J	1.2	79,000	1,000,000	1,000
Chloroform	ND/ 1.1	ND/ 1.1	1.2	2.8	19,000	28,000	1,000
1,2-Dichloroethane	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	6,000	24,000	1,000
1,1,1-Trichloroethane	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	210,000	1,000,000	50,000
Carbon Tetrachloride	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	2,000	4,000	1,000
Bromodichloromethane	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	11,000	46,000	1,000
1,2-Dichloropropane	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	10,000	43,000	NS
cis-1,3-Dichloropropene	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	**	**	**
Trichloroethene	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	23,000	54,000	1,000
Dibromochloromethane	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	110,000	1,000,000	1,000
1,1,2-Trichloroethane	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	22,000	420,000	1,000
Benzene	ND/ 1.1	ND/ 1.1	25	56	3,000	13,000	1,000
trans-1,3-Dichloropropene	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	**	**	**
2-Chloroethyl Vinyl Ether	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	NS	NS	NS
Bromoform	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	86,000	370,000	1,000
Tetrachloroethene	1.0 J	ND/ 1.1	ND/ 1.1	ND/ 1.1	4,000	6,000	1,000
1,1,2,2-Tetrachloroethane	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	34,000	70,000	1,000
Toluene	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	1,000,000	1,000,000	500,000
Chlorobenzene	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	37,000	680,000	1,000
Ethylbenzene	ND/ 1.1	ND/ 1.1	ND/ 1.1	ND/ 1.1	1,000,000	1,000,000	100,000
Xylene (Total)	ND/ 1.1	ND/ 1.1	ND/ 1.1	0.8 J	410,000	1,000,000	10,000

Total Targeted VOC Conc.	43	13	63.9	126.8	NS
Total Number of TICs	10	1	2	1	NS
Total Concentration of TICs	493	13	17	13	NS
Total VOC and TIC Conc.	536	26	81	140	1,000,000

Laboratory : Envirotech Research, Inc. (NJ Certification No. 12543)

ND : Not Detected

NS: Not Specified

J : Estimated value at or below the reporting limit.

U: Concentration considered as ND due to blank contamination, based on QA/QC review.

Q: Estimated concentration based on QA/QC review.

TICS : Tentatively Identified Compounds

All TIC concentrations are estimates

VOC : Volatile Organic Compound

RES : Residential Direct Contact Soil Cleanup Criteria

NON-RES : Non-Residential Direct Contact Soil Cleanup Criteria

GW : Impact to Groundwater Soil Cleanup Criteria

**: Cleanup Criteria for cis- and trans- 1,3-Dichloropropene are as follows:

Residential: 4,000; Non-Residential 5,000; Groundwater 1,000

TABLE 4
Semi-VOC Analytical Results for Post-Excavation Soil Samples
Ortho Diagnostic Systems Inc.
Raritan, New Jersey

Sample ID	PX-1	PX-5	NJDEP SOIL CLEANUP CRITERIA (7/11/96) (PPB)		
Lab Sample ID	96866	96870			
Sample Date	6/11/97	6/11/97			
Sample Depth	4.0	5.0	RES	NON RES	GW
Matrix:	SOIL	SOIL			

SEMI-VOLATILE ORGANIC COMPOUNDS (PPB)

N-Nitrosodimethylamine	ND/ 740	ND/ 370	NS	NS	NS
bis(2-Chloroethyl)ether	ND/ 740	ND/ 370	660	3,000	10,000
1,3-Dichlorobenzene	ND/ 740	ND/ 370	5,100,000	10,000,000	100,000
1,4-Dichlorobenzene	ND/ 740	ND/ 370	570,000	10,000,000	100,000
1,2-Dichlorobenzene	ND/ 740	ND/ 370	5,100,000	10,000,000	50,000
bis(2-chloroisopropyl)ether	ND/ 740	ND/ 370	2,300,000	10,000,000	10,000
N-Nitroso-di-n-propylamine	ND/ 740	ND/ 370	660	660	10,000
Hexachloroethane	ND/ 740	ND/ 370	6000	100,000	100,000
Nitrobenzene	ND/ 740	ND/ 370	28,000	520000	10,000
Isophorone	ND/ 740	ND/ 370	1,100,000	10,000,000	50,000
bis(2-Chloroethoxy)methane	ND/ 740	ND/ 370	NS	NS	NS
1,2,4-Trichlorobenzene	ND/ 740	ND/ 370	68,000	1,200,000	100,000
Naphthalene	67	ND/ 19	230,000	4,200,000	100,000
Hexachlorobutadiene	ND/ 740	ND/ 370	1,000	21,000	100,000
Hexachlorocyclopentadiene	ND/ 740	ND/ 370	400,000	7,300,000	100,000
2-Chloronaphthalene	ND/ 740	ND/ 370	NS	NS	NS
Dimethylphthalate	ND/ 740	ND/ 370	10,000,000	10,000,000	50,000
Acenaphthylene	ND/ 37	ND/ 19	NS	NS	NS
2,6-Dinitrotoluene	ND/ 740	ND/ 370	**	**	**
Acenaphthene	ND/ 37	ND/ 19	3,400,000	10,000,000	100,000
2,4-Dinitrotoluene	ND/ 740	ND/ 370	**	**	**
Diethylphthalate	ND/ 740	ND/ 370	10,000,000	10,000,000	50,000
4-Chlorophenyl-phenylether	ND/ 740	ND/ 370	NS	NS	NS
Fluorene	ND/ 37	ND/ 19	2,300,000	10,000,000	100,000

+ The list of semi-volatile organic compounds is continued on the following page.

TABLE 4
Semi-VOC Analytical Results for Post-Excavation Soil Samples
Ortho Diagnostic Systems Inc.
Raritan, New Jersey

Sample ID	PX-1	PX-5	NJDEP SOIL CLEANUP CRITERIA (7/11/96) (PPB)		
Lab Sample ID	96866	96870			
Sample Date	6/11/97	6/11/97			
Sample Depth	4.0	5.0	RES	NON RES	GW
Matrix:	SOIL	SOIL			

SEMI-VOLATILE ORGANIC COMPOUNDS (PPB)

N-Nitrosodiphenylamine	ND/ 740	ND/ 370	140,000	600,000	100,000
4-Bromophenyl-phenylether	ND/ 740	ND/ 370	NS	NS	NS
Hexachlorobenzene	ND/ 740	ND/ 370	660	2000	100000
Phenanthrene	ND/ 37	ND/ 19	NS	NS	NS
Anthracene	ND/ 37	ND/ 19	10,000,000	10,000,000	100,000
Di-n-butylphthalate	ND/ 740	ND/ 370	5,700,000	10,000,000	100,000
Fluoranthene	ND/ 37	ND/ 19	2,300,000	10,000,000	100,000
Pyrene	ND/ 37	ND/ 19	1,700,000	10,000,000	100,000
Benzidine	ND/ 1500	ND/ 750	NS	NS	NS
Butylbenzylphthalate	ND/ 740	ND/ 370	1,100,000	10,000,000	100,000
3,3'-Dichlorobenzidine	ND/ 1500	ND/ 750	2,000	6,000	100,000
Benzo(a)anthracene	ND/ 37	ND/ 19	900	4,000	500,000
Chrysene	ND/ 37	ND/ 19	9,000	40,000	500,000
bis(2-Ethylhexyl)phthalate	200 J	270 J	49,000	210,000	100,000
Di-n-octylphthalate	ND/ 740	ND/ 370	1,100,000	10,000,000	100,000
Benzo(b)fluoranthene	ND/ 37	ND/ 19	900	4,000	50,000
Benzo(k)fluoranthene	ND/ 37	ND/ 19	900	4,000	500,000
Benzo(a)pyrene	ND/ 37	ND/ 19	660	660	100,000
Indeno(1,2,3-cd)pyrene	ND/ 37	ND/ 19	900	4,000	500,000
Dibenz(a,h)anthracene	ND/ 37	ND/ 19	660	660	100,000
Benzo(g,h,i)perylene	ND/ 37	ND/ 19	NS	NS	NS

Total Targeted S-VOC Conc.	267	270	NS
Total Number of TICS	15	15	NS
Total Estimated Conc. TICs	42,640	16,320	NS
Total S-VOC and TIC Conc.	42,907	16,590	10,000,000

Laboratory: Envirotech Research, Inc. (NJ Certification No. 12543)

ND : Not Detected

NS: Not Specified

J : Estimated value at or below the reporting limit.

TIC : Tentatively Identified Compound

All TIC concentrations are estimates.

S-VOC: Semi-volatile organic compounds

**: Cleanup Criteria for Dinitrotoluene (2,4/2,6 - are as follows: Residential: 1000; Non-Residenti Groundwater: 10,000

RES : Residential Direct Contact Soil Cleanup C

NON-RES : Non-Residential Direct Contact Soil

GW : Impact to Groundwater Soil Cleanup Crite

TABLE 5
Total Petroleum Hydrocarbons (TPH) Analytical Results for Post-Excavation Soil Samples
Ortho Diagnostic Systems Inc.
Raritan, New Jersey

Sample ID	PX-1	PX-2	PX-3	PX-4	NJDEP SOIL CLEANUP CRITERIA (7/11/96) (PPM)		
Lab Sample ID	96866	96867	96868	96869			
Sample Date	6/11/97	6/11/97	6/11/97	6/11/97			
Sample Depth	4.0	5.0	5.0	5.5			
Matrix:	SOIL	SOIL	SOIL	SOIL	RES	NON RES	GW

TPH (ppm)	2020	396	ND/ 25	121	10000
-----------	------	-----	--------	-----	-------

Sample ID	PX-5	PX-6	PX-7	PX-8	NJDEP SOIL CLEANUP CRITERIA (7/11/96) (PPM)		
Lab Sample ID	96870	96871	96872	96873			
Sample Date	6/11/97	6/11/97	6/11/97	6/11/97			
Sample Depth	5.0	6.0	5.0	4.0			
Matrix:	SOIL	SOIL	SOIL	SOIL	RES	NON RES	GW

TPH (ppm)	653	ND/ 25	ND/ 25	ND/ 25	10000
-----------	-----	--------	--------	--------	-------

Laboratory: Envirotech Research, Inc. (NJ Certification No. 12543)

ND : Not Detected

TIC : Tentatively Identified Compound

All TIC concentrations are estimates.

RES : Residential Direct Contact Soil Cleanup Criteria

NON-RES : Non-Residential Direct Contact Soil Cleanup Criteria

GW : Impact to Groundwater Soil Cleanup Criteria

APPENDIX I

UST Closure Plan Approval Application



April 16, 1997

State of New Jersey
Department of Environmental Protection
Bureau of Underground Storage Tanks
401 East State Street
Trenton, NJ 08625

RE: Ortho Diagnostic Systems, Inc.
Raritan, Somerset County, New Jersey
UST Closure Application

Dear Sir or Madam:

McLaren/Hart Inc., is submitting this application on behalf of Ortho Diagnostic Systems Inc. for closure of an estimated 12,000 - gallon underground storage tank. The site from where the tank will be removed is located at 1001 Rt. 202 North, Raritan, Somerset County, New Jersey. Enclosed please find the following materials filed in accordance with N.J.A.C. 7:14B-9:

- Underground Storage Tank Closure Plan Approval Application
- Fee payable to Treasurer, State of New Jersey
- Location map with project site delineated
- A site location map identifying the UST system to be removed
- UST closure implementation schedule

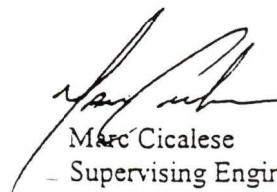
The product stored in the tank is presumably waste (spent) solvents. The post-excavation soil samples will be analyzed in accordance with N.J.A.C. 7:26E-3. The tank was discovered as part of the RCRA Facility Investigation (RFI). Mr. Rodger Fedak of the Site Remediation Program is the NJDEP Case Manager and Mr. Henry Schuver is the US EPA Region II Case Manager.

We would appreciate your expediency in this matter since the integrity of the tank is unknown. If you have any questions or require further information, please contact us at (908) 647-8111.

Sincerely,

A handwritten signature in black ink, appearing to read 'Deven B. Schmitt'.

Deven B. Schmitt, P.E.
Principal Engineer


A handwritten signature in black ink, appearing to read 'Marc Cicalese'.

Marc Cicalese
Supervising Engineer

cc: Robin Rosen, Ortho Diagnostic Systems Inc.
Richard LoCastro, McLaren/Hart Inc.
Rodger Fedak, Site Remediation Program, NJDEP
Henry Schuver, US EPA Region II

(F1573)

25 Independence Boulevard, Warren, NJ 07059 (908) 647-8111 FAX (908) 647-8162

UST CLOSURE IMPLEMENTATION SCHEDULE

Ortho Diagnostic Systems Inc. Facility

1001 Rt. 202 North

Raritan, NJ 08869

UST Registration Number: 0058827

In accordance with the requirements for underground storage tank closure, the following presents the proposed implementation schedule:

Anticipated Date of Excavation One day after receipt of an approval
closure plan from NJDEPE

Anticipated Date of Soil Sampling Same date as excavation

Anticipated Date of Monitoring Well Installation . . . One week after tank excavation

Anticipated Date of Report Submission Four weeks after receipt of laboratory data

The UST is presumed to have been used for storing waste (spent) solvents. Its capacity is estimated to be 12000 gallons.

9. Total regulated underground storage tank capacity at facility (gallons) 0 0 1 2 0 0 0

10. Facility Type: A State C County/Municipal E Charitable / Public School G Other
 B Commercial/ D Federal F Residence H Farm (as defined in N.J.
 Industrial 54:4-23.1 et seq.)

11. Is a copy of the facility site plan submitted with this registration pursuant to N.J.A.C. 7:14B-2? YES NO**SECTION B - SPECIFIC TANK INFORMATION**

ALL underground tanks, including those taken out of operation (UNLESS THE TANK WAS REMOVED FROM THE GROUND PRIOR TO 9/3/86) must be registered. Report all tank/piping status changes unless previously submitted.

1. Tank Identification Number	TANK NO. <u>E 0 1 1</u>	TANK NO.	TANK NO.	TANK NO.	TANK NO.			
2. CAS Number (hazardous substances only)								
3. Date Tank Installed (Month/Day/Year) unknown	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year			
4. Tank Size (gallons)	<u>1 2 0 0 0</u>							
5. Tank Contents (Mark one "X" for each tank)								
A. Leaded gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
B. Unleaded gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
C. Alcohol-enriched gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
D. Light diesel fuel (No. 1-D)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
E. Medium diesel fuel (No. 2-D)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
F. Waste Oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
G. Kerosene (No. 1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
H. Home heating oil (No. 2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
J. Heating oil (No. 4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
K. Heavy heating oil (No. 6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
L. Aviation fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
M. Motor oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
N. Lubricating oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
P. Sewage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Q. Sewage sludge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
R. Other hazardous substances (specify)	<u>waste solvent</u>							
S. Hazardous waste (specify ID number)								
T. Materials (please specify)								
U. Emergency spill tank (specify substance)								
V. Other petroleum products (please specify)								
W. Other (please specify)								
6. Tank & Piping Construction (Mark one each for both tank & piping)	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
A. Bare Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
B. Cathodically protected steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Fiberglass-coated steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Fiberglass-reinforced plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Ferrocement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Other (please specify)								
7. Tank & Piping Structure (Mark one each for both tank & piping)	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
A. Single wall	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
B. Double wall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Other (please specify)								
8. Monitoring Detection System (Mark one that apply for both tank & piping)	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
A. Aboveground, Recirculation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. In-Tank Gauging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Remote Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. In-Situ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. In-Situ Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Groundwater observation wells	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Water elevation wells	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Automatic monitoring system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Tank Truck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Tank Identification Number	TANK NO. E 0 1 1	TANK NO.	TANK NO.	TANK NO.	TANK NO.
3. Type of Monitoring/Detection System K. None	<input checked="" type="checkbox"/> Tank Piping	<input type="checkbox"/> Tank Piping			
L. Other (please specify) Overfill Protection (tank only) (Mark one X for each tank)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A. Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Spill Containment Around Fill Pipe (Mark one X for each tank)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A. Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Tank Status (Mark one X for each tank)	Tank Piping	Tank Piping	Tank Piping	Tank Piping	Tank Piping
A. In-use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Empty less than 12 months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Empty 12 months or more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Emergency spill tank (sump)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Emergency backup generator tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Abandoned in Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Removed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Other (please specify)	full of material and abandoned in-place				
12. If box 11B, C, or D above has been marked, indicate the estimated date last used (month/day/year)	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
13. Closure Information - Tank ID No.	TANK NO. <input type="checkbox"/>	TANK NO. <input type="checkbox"/>	TANK NO. <input type="checkbox"/>	TANK NO. <input type="checkbox"/>	TANK NO. <input type="checkbox"/>
A. Date abandoned in place	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
B. Date taken temporarily out of service	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
C. Date removed	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
D. Date of Sale or Transfer	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
E. TMS # (if applicable)					
F. SRA # (if applicable)					

SECTION C - FINANCIAL RESPONSIBILITY

Does this facility have a Financial Responsibility Assurance Mechanism as required in 40 CFR 280? YES NO
Please list the appropriate financial information below:

self-insured

Type

Carrier / Issuing Agency

Effective Date

/ /

Expiration Date

\$

Amount

SECTION D - MONITORING SYSTEMS

Does this facility have a release detection monitoring system which is in compliance with N.J.A.C. 7:14B-6? YES NO
(If "No", please be aware that the facility must meet the appropriate deadline. (See "Dates to Know" on Page 4))

SECTION E - RECORDKEEPING/COMPLIANCE

- Please answer all the questions in this section on a facility basis. Any one tank not in compliance requires a "NO" answer for the entire facility.
1. Does this facility have cathodic protection systems for all steel tanks and piping?
 YES NO
 2. Are the systems properly operated and maintained pursuant to N.J.A.C. 7:14B-5?
 YES NO
 3. Are the performance claims and documentation of monitoring systems maintained by the owner or operator pursuant to N.J.A.C. 7:14B-5?
 YES NO
 4. Are the proper monitoring, testing, sampling, repair and inventory records kept on-site pursuant to N.J.A.C. 7:14B-5 and 6?
 YES NO
 5. Is the proper Release Response Plan kept on-site pursuant to N.J.A.C. 7:14B-5?
 YES NO
 6. Does the facility have soil and over fill protection systems pursuant to N.J.A.C. 7:14B-4?
 YES NO
 7. Have all Fill Ports been permanently marked as per API #1637 pursuant to N.J.A.C. 7:14B-5?
 YES NO

Signature / Name		(Title)		Name of Firm or Organization	
(Signant's Name)		(Title)		(Name of Firm or Organization)	
(Dated)		(Title)		(Name of Firm or Organization)	
I declare Schmitte, Principal Engineer		McLaren/McClellan, Inc.		(Name of Firm or Organization)	
4-16-97		0012273		(Name of Firm or Organization)	
<i>John Schmitte</i>					

CERTIFICATION NO. 2	
Director, Operations (Title)	
WILLIAM SIMAK (Typed / Printed Name)	
April 15, 1997 (Date)	
(Signature)	
I certify under penalty of perjury that the information provided in this document is true, accurate and complete to the best of my knowledge, information and belief. I am aware that it is a violation of law that this document contain false or misleading information and believe that it is my duty to communicate clearly and accurately for the benefit of all concerned parties. I have read and understood the above paragraph and hereby certify that it is true and accurate to the best of my knowledge.	

CERTIFICATION NO. 1
NOTE: IF THE PERSON SIGNING CERTIFICATION NO. 2 IS THE SAME AS THE PERSON SIGNING CERTIFICATION NO. 1
CERTIFICATION NO. 2 NEED NOT BE SIGNED. (If different persons are required to sign No. 1 and No. 2, then they must do so.)

CERTIFICATIONS

- | | |
|-------------------|---|
| December 22, 1998 | ALL registered names which insure liability coverage and split liability protection. |
| December 22, 1993 | ALL registered names which insure liability coverage and split liability protection. |
| December 22, 1993 | ALL registered names which insure liability coverage and split liability protection. |
| December 22, 1993 | ALL registered names which insure liability coverage and split liability protection. |
| December 22, 1990 | ALL registered names which insure liability coverage and split liability protection. |
| December 22, 1990 | ALL new state-by-state registration names which insure liability coverage and split liability protection. |

Digitized by srujanika@gmail.com

Please make checks payable to: "Treasury, State of New Jersey". Use of the enclosed return envelope will expedite processing. Registration and Billing Schedule can be found in N.J.A.C. 7:1-3B.
All initial Registration fees are \$100 per facility.

STATE OF NEW JERSEY
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 BUREAU OF FIELD OPERATIONS
 401 EAST STATE STREET
 CN 028
 TRENTON, NEW JERSEY 08625

**UNDERGROUND STORAGE TANK CLOSURE PLAN
APPROVAL APPLICATION**

Pursuant to the Underground Storage of Hazardous Substances Act, N.J.A.C. 7:14B-9 et seq. and the Technical Requirements for Site Remediation, N.J.A.C. 7:26E et. seq.

This application form shall be used by all applicants planning to close Underground Storage Tank Systems pursuant to N.J.A.C. 7:14B-9 et seq.

INSTRUCTIONS

- Before completing this application please refer to the attached Application Instruction sheet.
- Please print legibly or type. Fill in all appropriate blanks. Incomplete applications will be returned without being processed. This application form requires that additional sheets be attached for some of the information requested. You may call 609/984-3156 for assistance.
- Return one original of this form (including attachments) to the address above. You must sign all forms as required and attach a check for the proper fee (see the fee schedule on Page 3).
- If the subject facility is not registered the Closure Plan will not be processed.

FACILITY REGISTRATION # 0058827

If this application is a resubmission due to a deficiency, enter assigned TMS #

Is this facility currently subject to ISRA? YES NO x If YES enter ISRA case #

Is this submittal in response to a discharge? YES NO x If YES enter Incident #

I. FACILITY INFORMATION

A. FACILITY NAME ORTHO DIAGNOSTIC SYSTEMS, INC.

FACILITY STREET ADDRESS 1001, Route 202 North

MUNICIPALITY Raritan County Somerset

TELEPHONE NUMBER (908) 704-3163

III. UST REMOVAL OR ABANDONMENT

A. Complete the following information concerning UST system to be removed or abandoned. Attach additional pages if necessary.

Number of Tanks	Length of appurtenant piping (ft)	Tank Capacity (gallons)	SUBSTANCE Stored	Closure Type (circle one)
1	0	12000	Spent Solvents	REMOVAL / ABANDONMENT
				REMOVAL / ABANDONMENT
				REMOVAL / ABANDONMENT
				REMOVAL / ABANDONMENT
				REMOVAL / ABANDONMENT

* if material is not a petroleum product, use chemical name and CAS number to identify tank's content. (Brand or trade names are unacceptable.)

B. SITE INVESTIGATION / REMEDIAL INVESTIGATION PLAN

Attach the following information for UST closure, as required by N.J.A.C. 7:14B-9.2 or 9.2(b):

- a. Implementation schedule;
- b. A scaled site map clearly identifying the UST system location(s) scheduled for closure;
- c. Attach all justification for any abandonments-in-place proposed for tanks and/or piping as required by N.J.A.C 7:14B-9.1(d). Attach the certification statement (on the back page) for abandonment-in-place.

Check Correct Response:

- Site Investigation / Remedial Investigation will be performed in accordance with N.J.A.C. 7:26E, the Technical Requirements for Site Remediation.
- A variance from N.J.A.C. 7:26E is being requested. In accordance with N.J.A.C. 7:26E-1.6(d), an alternate plan is attached for review.

C. DECOMMISSIONING PLAN (Circle correct response)

YES NO Will the UST decommissioning conform with N.J.A.C. 7:26E-6.3(b); the New Jersey Uniform Construction Code (N.J.A.C. 5:23) and the current American Petroleum Institute's guidance? (If NO is circled, please explain reason on an attached page.)

V. APPLICATION REVIEW AND ISSUANCE OF CLOSURE APPROVAL

The Department will review the closure plan for completeness and appropriateness as specified in Subchapter 9 of the UST regulations and the Technical Requirements of Site Remediation, N.J.A.C. 7:26E. Plan approval will indicate that the owner or operator may proceed with the closure. All appropriate and applicable permits, licenses and certificates required for any of the above activities issued by any local, state and/or federal agencies must be obtained separately from this application.

VI. MAILING ADDRESS AND SIGNATURE

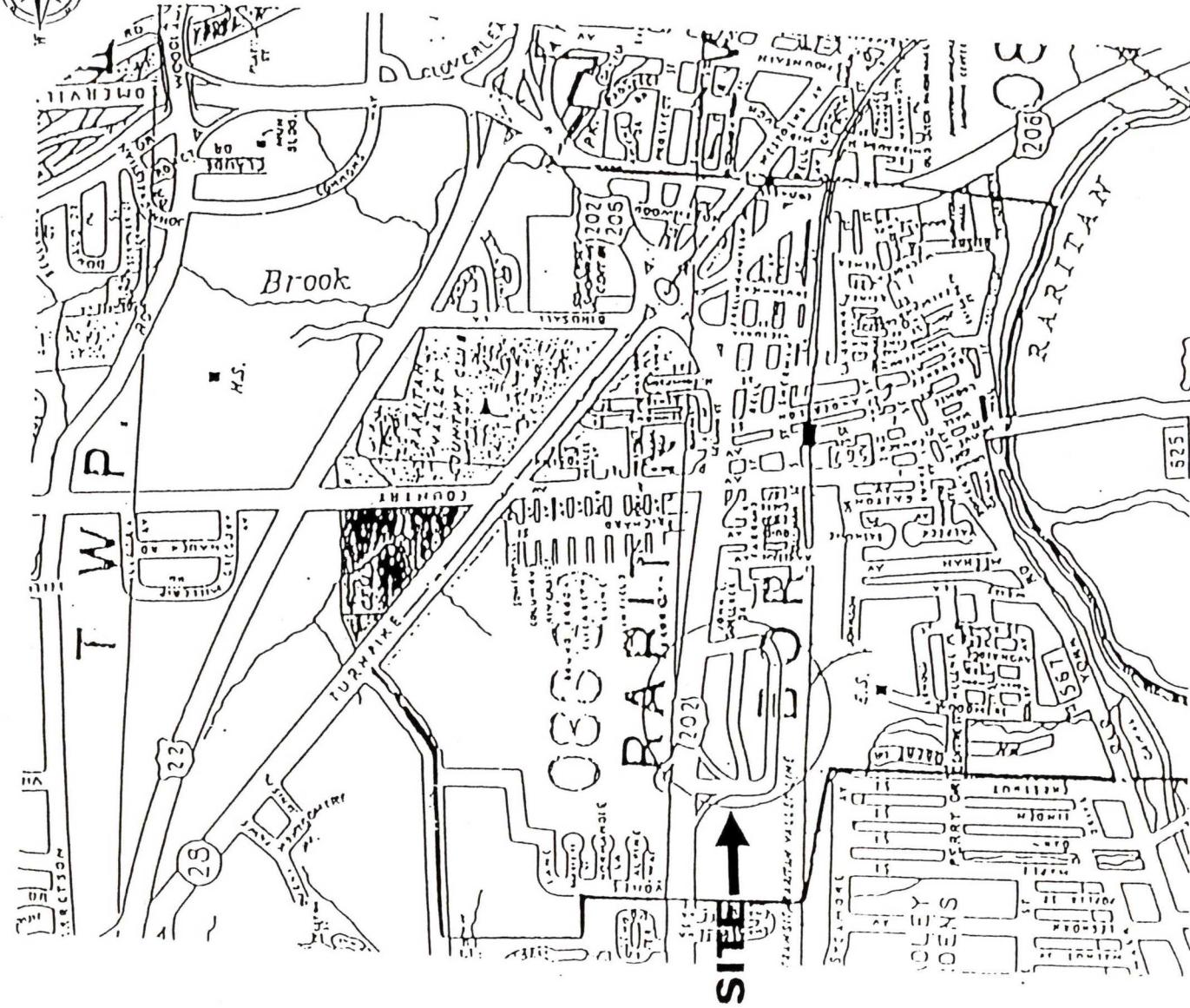
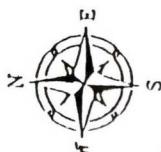
List the person and the address the closure approval should be mailed to:

Name Deven Schmitt, P.E.
Company McLaren/Hart, Inc.
Address 25 Independence Blvd.
City Warren State N.J. ZIP 077059
PHONE NUMBER (908) 647-8111

SIGNATURE OF CONTACT PERSON

This application form must be signed by a contact person of the owner or operator of the subject facility. The contact person should have overall knowledge of tank decommissioning procedures and the site assessment requirements applicable to the tank closure which is the subject of this application.

NAME (print or type) Deven Schmitt SIGNATURE 
TITLE Principal Engineer DATE 4/16/97
PHONE NUMBER (908) 647-8111



SITE LOCATION MAP

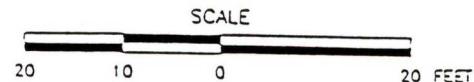
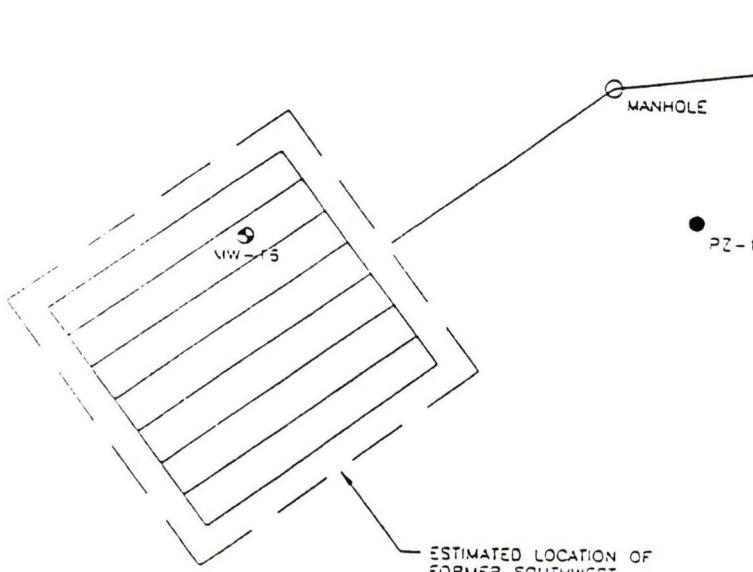
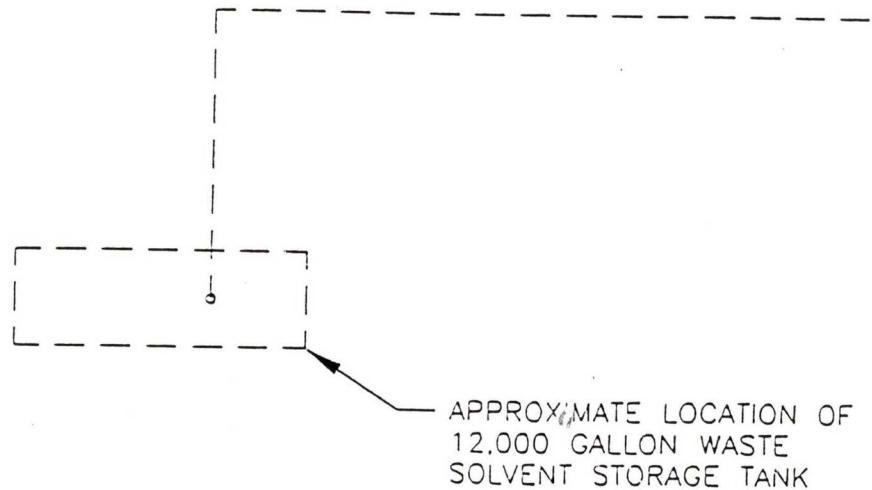
ORTHO DIAGNOSTIC SYSTEMS INC.
RARITAN, NEW JERSEY

McLaren Hart
ENVIRONMENTAL
ENGINEERING
CORPORATION

DRAWN S.F.H. CHK'D. S.V.
SCALE AS SHOWN DATE: 04/15/97



MW-23



LEGEND

● EXISTING SHALLOW MONITORING
PIEZOMETER LOCATION

APPROXIMATE LOCATION OF NEWLY DISCOVERED TANK

ORTHO DIAGNOSTIC SYSTEMS INC.
RARITAN, NEW JERSEY



McLaren[®] Hart ENVIRONMENTAL
ENGINEERING
CORPORATION

DRAWN: S.F.H.

CHK'D: S.V.

SCALE: AS SHOWN

DATE: 04/15/97

APPENDIX II

NJDEP UST System Closure Approval

**UNDERGROUND STORAGE TANK SYSTEM
CLOSURE APPROVAL**

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

**DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
BUREAU OF FIELD OPERATIONS
CN-028, TRENTON, NJ 08625-0028**

TMS # C97-0320

UST # 0058827

ORTHO DIAGNOSTIC SYSTEMS, INC.
1001 ROUTE 202 NORTH
RARITAN

SOMERSET

THE ABOVE LISTED FACILITY IS HEREBY GRANTED APPROVAL TO PERFORM
THE FOLLOWING ACTIVITY IN ACCORDANCE WITH NJ.A.C. 7:14b-1 et seq:

REMOVAL OF: one 12,000 gallon spent solvents UST(s), and
appurtenant piping.

SITE ASSESSMENT: Conduct a site investigation for the UST(s) and appurtenant piping specified in this approval in accordance with the Technical Requirements for Site Remediation, NJ.A.C. 7:26E.

The management of any excavated soils must follow the requirements listed in the Attachment enclosed within.

Note: The UNDERGROUND STORAGE TANK SERVICES CERTIFICATION ACT, N.J.S.A. 58:10A-24, requires all services performed on an UST system for the purpose of complying with P.L.1986, c.102 to be performed by or under the immediate on-site supervision of a person certified by the Department for that service. The certified persons providing that service must be employed by a business that is also certified by the Department for that service.

CONTACT PERSON:

TELEPHONE:

DEVEN SCHMITT

908-647-8111

EFFECTIVE DATE: 05/02/97

THIS FORM MUST BE DISPLAYED AT THE SITE DURING THE APPROVED
ACTIVITY AND MUST BE MADE AVAILABLE FOR INSPECTIONS AT ALL TIMES.

H. R. Patel
**Joshua Gradwohl, SUPERVISOR
BUREAU OF FIELD OPERATIONS**

C JUN



RECEIVED
MAY 03 1997

Christine Todd Whitman
Governor

State of New Jersey
Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

Division of Responsible Party Site Remediation
Bureau of Field Operations
CN028
Trenton, N.J. 08629-0028

Dear Applicant:

The New Jersey Department of Environmental Protection (NJDEP) received an "Underground Storage Tank Closure Plan Approval Application" for your facility. This application detailed the procedures to be implemented as required by the Underground Storage Tank Systems Technical Requirements and Procedures at N.J.A.C. 7:14B-1 et seq. and N.J.A.C. 7:26E et seq. Based upon our review of the information submitted, a Closure Approval is hereby granted.

A completed Underground Storage Tank Facility Questionnaire must be submitted to the NJDEP Registration & Billing Unit within seven (7) days of removal or abandonment of the tank(s). The date of removal or abandonment must be included with the Facility Questionnaire. The Facility Questionnaire will be used to delist the tank(s) from the Underground Storage Tank registration files. A copy of the Facility Questionnaire is attached.

Within ninety (90) days of completion of the tank(s) closure, a Site Investigation Report or Remedial Investigation Report prepared pursuant to N.J.A.C.7:26E, the Technical Requirements for Site Remediation, must be submitted to the Bureau of Field Operations. The enclosed Site Remediation Program, Site Investigation and Remedial Investigation Report Checklist shall also be completed and submitted with the required report. If contamination is detected you are required to initiate corrective action. All discharges must be reported to the NJ Spill Hotline at (609) 292-7172.

Once you have obtained a Closure Approval, a demolition permit issued pursuant to N.J.A.C. 5:23 et seq. and authorized by the Department of Community Affairs (DCA), Construction Code Element must be procured from your local construction code official. For further information in obtaining a demolition permit, please contact the local construction code official directly, or DCA Code Assistance Unit at (609) 530-8793.

Attachments: Underground Storage Tank Facility Questionnaire
Site Investigation and Remedial Investigation Report Checklist

9. Total regulated underground storage tank capacity at facility (gallons) _____

10. Facility Type: A State C County/Municipal E Charitable / Public School G Other
 B Commercial/ D Federal F Residence H Farm (as defined in N.J.S.
 Industrial 54:4-23.1 et seq.)

11. Is a copy of the facility site plan submitted with this registration pursuant to N.J.A.C. 7:14B-2? YES NO

SECTION B - SPECIFIC TANK INFORMATION

ALL underground tanks, including those taken out of operation (UNLESS THE TANK WAS REMOVED FROM THE GROUND PRIOR TO 9/3/86) must be registered. Report all tank/piping status changes unless previously submitted.

1. Tank Identification Number	TANK NO.									
2. CAS Number (hazardous substances only)										
3. Date Tank Installed (Month/Day/Year)	Mo. Day Year									
4. Tank Size (gallons)										
5. Tank Contents (Mark one "X" for each tank)										
A Leaded gasoline	<input type="checkbox"/>									
B Unleaded gasoline	<input type="checkbox"/>									
C Alcohol-anchored gasoline	<input type="checkbox"/>									
D Light diesel fuel (No. 1-D)	<input type="checkbox"/>									
E Medium diesel fuel (No. 2-D)	<input type="checkbox"/>									
F. Waste Oil	<input type="checkbox"/>									
G. Kerosene (No. 1)	<input type="checkbox"/>									
H. Home heating oil (No. 2)	<input type="checkbox"/>									
J. Heating oil (No. 4)	<input type="checkbox"/>									
K. Heavy heating oil (No. 6)	<input type="checkbox"/>									
L. Aviation fuel	<input type="checkbox"/>									
M. Motor oil	<input type="checkbox"/>									
N. Lubricating oil	<input type="checkbox"/>									
P. Sewage	<input type="checkbox"/>									
Q. Sewage sludge	<input type="checkbox"/>									
R. Other hazardous substances (specify)										
S. Hazardous waste (specify ID number)										
T. Mixtures (please specify)										
U. Emergency spill tank (specify substance)										
V. Other petroleum products (please specify)										
W. Other (please specify)										
6. Tank & Piping Construction (Mark one each for both tank & piping)	Tank	Piping								
A. Bare Steel	<input type="checkbox"/>									
B. Cathodically protected steel	<input type="checkbox"/>									
C. Fiberglass-coated steel	<input type="checkbox"/>									
D. Fiberglass-reinforced plastic	<input type="checkbox"/>									
E. Internally lined	<input type="checkbox"/>									
F. Other (please specify)										
7. Tank & Piping Structure (Mark one each for both tank & piping)	Tank	Piping								
A. Single wall	<input type="checkbox"/>									
B. Double wall	<input type="checkbox"/>									
C. Other (please specify)										
8. Type of Monitoring/Detection System (Mark all that apply for both tank & piping)	Tank	Piping								
A. Statistical Inventory Reconciliation	<input type="checkbox"/>									
B. Manual Tank Gauging	<input type="checkbox"/>									
C. Inventory Control	<input type="checkbox"/>									
D. Interstitial	<input type="checkbox"/>									
E. Precision Test										
F. Ground water observation wells										
G. Vapor observation wells										
H. In-tank (automatic) monitoring gauge										
J. Periodic Tank Test										

IMPORTANT INFORMATION

FEE: Please make checks payable to: "Treasurer, State of New Jersey". Use of the enclosed return envelope will expedite processing. Registration and Billing Schedule can be found in N.J.A.C. 7:14B.
PENALTY: All Initial Registration fees are \$100 per facility.
EMERGENCY: Failure by owner or operator of a regulated underground storage tank to comply with any requirement of the State UST Act or regulations may result in the penalties set forth in N.J.S.A. 58:10A-10.
UPGRADE EXEMPTION: If a discharge or spill occurs, the NJDEP Hotline at (609) 292-7172 must be called IMMEDIATELY - 24 hours a day. Residential heating oil underground storage tanks are exempt from all upgrade requirements.

DATES TO KNOW (critical deadlines)

- December 22, 1988 — All new federally regulated tank systems must have cathodic protection and spill/overfill protection.
September 4, 1990 — All new State-only regulated tank systems must have cathodic protection and spill/overfill protection.
December 22, 1990 — All federally regulated piping must have begun leak detection.
February 19, 1993 — All federally regulated tank systems must maintain financial responsibility assurance.
December 22, 1993 — All federally regulated tank systems must have begun leak detection.
December 22, 1998 — All regulated tanks shall install cathodic protection and spill/overfill protection.

CERTIFICATIONS

NOTE: IF THE PERSON SIGNING CERTIFICATION NO. 2 IS THE SAME AS THE PERSON SIGNING CERTIFICATION NO. 1, THEN CERTIFICATION NO. 2 NEED NOT BE SIGNED. (If different persons are required to sign No. 1 and No. 2, then they must do so.)

CERTIFICATION NO. 1:

Must be signed by the highest ranking individual at the facility with overall responsibility

"I certify under penalty of law that the information provided in this document is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant civil and criminal penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

(Typed / Printed Name)

(Signature)

(Title)

(Date)

CERTIFICATION NO. 2:

Must be signed as follows:

- For a corporation, by a principal executive officer of at least the level of vice president
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively
- For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official
- For persons other than indicated above, by the person with legal responsibility for the site

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil and criminal penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

(Typed / Printed Name)

(Signature)

(Title)

(Date)

CERTIFICATION NO. 3:

If applicable, must be signed by the individual who is certified to perform services.

"I certify under penalty of law that the information provided in this document is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant civil and criminal penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

(Typed / Printed Name)

(Title)

(Signature)

(Date)

(Name of Firm, if applicable)

(N.J. Certification Number)

**New Jersey Department of Environmental Protection
Site Remediation Program
Site Investigation/Remedial Investigation Report Checklist**

- Oversight Document: UST Regulations Industrial Site Recovery Act (ISRA)
 Administrative Consent Order (ACO) Memorandum of Agreement (MOA)
 Memorandum of Understanding

A. Case Name (and AKA): _____
 Address: _____
 Municipality/County: _____
 RP Contact: _____ Telephone: _____

B. (Check as Appropriate)	C. (Complete all that Apply)
<input type="checkbox"/> Site Investigation (SI) Report <input type="checkbox"/> Remedial Investigation (RI) Report	• Assigned Case Manager _____ • ISRA Case Number _____ (5 digits) • UST Registration Number _____ (7 digits) • Incident Report Number _____ (10 or 12 digits) • Tank Closure Number C9 _____ C9 _____ C9 _____ (7 characters) C9 _____ C9 _____ C9 _____ • EPA ID Number NJ _____ (12 characters)

D. (Circle "Yes" or "No" as applicable for each statement. If the statement is not applicable, indicate "N/A")

- 1) All "Areas of Concern", as defined in N.J.A.C. 7:26E-1.8 or 40 CFR 300.5, noted in the attached report were sampled pursuant to N.J.A.C. 7:26E-3 and 4, and analyzed pursuant to Table 2-3, as applicable Yes No
 (If the answer to #1 is "No", answer 1A & 1B. If the answer is "Yes", go to #2)
- A) Did the Department grant a variance from any of the requirements of N.J.A.C. 7:26E-2 through 6, pursuant to N.J.A.C. 7:26E-1.6(d)1 and 2 Yes No
- B) If alternative sampling and/or investigatory methods were utilized without Department pre-approval, is the documentation required by N.J.A.C. 7:26E-1.6(c) provided Yes No
- 2) The attached report documents all individual contaminants below most recently published residential and impact to ground water soil cleanup criteria contained in the "Site Remediation Newsletter" Yes No
- 3) The attached report includes results from a ground water investigation conducted pursuant to N.J.A.C. 7:26E-3.7 or 4.4 (if "No", go to question 5, if "Yes", answer question 4) Yes No
- 4) The attached report documents all individual contaminants below applicable Ground Water Quality Standards as contained in N.J.A.C. 7:9-6 Yes No
- 5) The attached report was submitted in response to a discharge of any contaminants as defined at N.J.A.C. 7:26E-1.8 Yes No
 If answer to #5 was "Yes" continue to 5A through 5E. If answer is "No" go to #6
 Pursuant to N.J.A.C. 7:26E-3.7 and/or 4.4:
- A) Was the discharge associated with a substance with a solubility greater than 100 milligrams per liter (i.e. gasoline, #2 heating oil etc.) Yes No
- B) Does all the soil between the discharge (last depth of contamination above remediation standard) and ground water/bedrock contain less than 15% silt and clay Yes No

F. RI Reporting Requirements (Include all items above plus the following..)

- 13) Additional information collected pursuant to N.J.A.C. 7:26E-4.1 and any work plan approved per N.J.A.C. 7:26E-4.8 (i.e. well search information results/summary, subsurface gas threats, investigation of sediment, surface water, wetlands), as applicable Pg. No. _____
- 14) Well Search Results (pursuant to 7:26E-4.4(h) and Appendix B) Pg. No. _____
- 15) Description of treatability bench scale or pilot studies as well as data to develop permit limits for air, surface water and/or ground water discharges Pg. No. _____
- 16) Average contaminant concentrations for each AOC (see N.J.A.C. 7:26E-4.9 (c)(3)i), and a description of the procedures used for averaging Pg. No. _____
- 17) Well casing and ground water elevations (include well Certifications A and B) Pg. No. _____
- 18) Ground water temperature, pH and conductivity measurements Pg. No. _____
- 19) Review of inventory control records to identify product loss Pg. No. _____
- 20) Results of an Ecological Assessment if conducted Pg. No. _____
- 21) Summary of Landfill records, if site is a landfill Pg. No. _____
- 22) Site base maps with sampling locations* and diagrams shall include:
- A) ground water elevation contour maps with flow direction, and trial studies, if applicable Pg. No. _____
 - B) top of bedrock contour map, if bedrock was encountered Pg. No. _____
 - C) contaminant isopleth maps for ground water showing horizontal/vertical extent of contamination above applicable standards, and free product Pg. No. _____
 - D) isopleth maps for soil contaminants required if greater than 25 soil samples collected (suggested for less than 25 samples) Pg. No. _____
 - E) horizontal and vertical distribution of contaminants in soil and sediment with sample numbers* and contaminant concentrations Pg. No. _____
 - F) all ground water sampling points* including open hole and screened intervals Pg. No. _____
 - G) if applicable, a map of surface water, sediment and air borne contaminants Pg. No. _____
 - H) photos may be submitted of sample location (specify photo location on site map) Pg. No. _____
 - I) other data collected (e.g. soil gas), specify type Pg. No. _____

*NOTE: The same alpha/numeric sample label used in the RI workplan shall be used in the RI Report.

G. Report Contents Completeness and Two Part Certification:

- 23) The attached report conforms to the specific reporting requirements listed at N.J.A.C. 7:26E-3.10 for a SI Report or N.J.A.C. 7:26E-4.9 for an RI Report Yes No

Name: _____ Signature: _____ UST Cert. No. _____

Firm: _____ Firm's UST Certification Number: _____

(NOTE: Certification numbers required only if work was conducted on USTs regulated per N.J.S.A. S8:10A-21 et seq.)

- 24) Two part certification signed and completed pursuant to one of the following requirements (indicate the page number next to the appropriate regulatory citation):

- A) N.J.A.C. 7:26C-12 Pg. No. _____
- B) N.J.A.C. 7:14B-23 Pg. No. _____
- C) N.J.A.C. 7:26B-113 Pg. No. _____

CHECKLIST ADDENDUM

I. OWNERS NAME AND ADDRESS

ZIP _____ COUNTY _____

TELEPHONE NO. _____

II. TANK DECOMMISSIONING CERTIFICATION

(person performing tank decommissioning portion of closure plan - NJ.A.C. 7:14B-9.5(a)4)

"I certify under penalty of law that tank decommissioning activities were performed in compliance with NJ.A.C. 7:14B-9.2(b)3. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____

SIGNATURE _____

COMPANY NAME _____
(Preparer of Tank Decommissioning)

DATE _____

III. CERTIFICATIONS BY THE RESPONSIBLE PARTY(IES) OF THE FACILITY

A. The following certification shall be signed by the highest ranking individual with overall responsibility for that facility [NJ.A.C. 7:14B-2.3(c)1].

"I certify under penalty of law that the information provided in this document is true accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____

SIGNATURE _____

COMPANY NAME _____

DATE _____

B. The following certification shall be signed as follows (according to the requirements of NJ.A.C. 7:14B-2.3(c)2):

1. For a corporation, by a principal executive officer - or at least the level of vice president.
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency by either the principal executive officer or ranking elected official.
4. In cases where the highest ranking corporate partnership, governmental officer or official at the facility as required in A above is the same person as the official required to certify in B, only the certification in A is necessary. In all other cases, the certifications of A and B shall be made.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____

SIGNATURE _____

COMPANY NAME _____ DATE _____

The following list are basic soil management requirements that must be met for all soil excavation activities. More detailed guidance is available in the Guidance Document for the Management of Excavated Soils, (MES-REV2, 5/93). This document is available from the Division of Responsible Party Site Remediation general number at (609) 292-2107.

1. Hazardous waste must not be staged on site longer than 90 days. Non-hazardous soils must not be staged on site for more than 6 months.
2. The Facility must manage all soils containing hazardous wastes as a hazardous waste.
3. The Facility must take steps to prevent the movement of contaminants from the stored soil to the environment by volatilization, runoff, leaching and fugitive dust emissions. The actual containment measures implemented must be commensurate with the nature of the soil contaminants.
4. As a precaution, the facility must store any potentially contaminated soil on an impervious material and cover the soil with a waterproof material.
5. The facility must not mix contaminated soils with clean soils and shall segregate all excavated soils by contaminant level (such as clean, moderately contaminated and heavily contaminated) immediately upon removal from the ground.
6. During all activities including soil excavation, staging and containment, efforts must be taken to minimize disturbances of contaminated soils. Contaminated soils may not be excavated until appropriate provisions are made for their management and necessary disposal.

IMPORTANT NOTICE

Copies of several NJDEP applications and forms, including the UST closure application (UST-013, 02/95), are available on the Department's computer bulletin board.

The setting for the bulletin board is 8 - N - 1 (8 bits, parity none, 1 stop bit). The telecommunication number to access the bulletin board is (609) 292-2006. After logging onto the bulletin board you will need to enter into the SRP (Site Remediation Program) subdirectory of the main menu. Once in the SRP subdirectory just read the heading and description of the documents available for downloading to determine which forms meet your needs.

All forms are in Wordperfect 5.1 format.

APPENDIX III

Local Building and Construction Permits



CONSTRUCTION PERMIT

IDENTIFICATION Block 31Lot 4Date Issued 5/29/97
Control #
Permit #97848

Work Site Location DIGITAL DIAGNOSTIC SYSTEMS
1001 ATE 202 NORTH KARITAN Contractor LIBIE / PROTANK
Owner in Fee SAME AS ABOVE Address 3209 N MILL RD.
Address VINELAND, NJ 08360
Tele. (609) 496-4401 Exp. Date _____
Tele. (908) 704-3163 Cont. Reg. No. _____
Lic. No. or Bldrs. Reg. No. _____
Federal Emp. No. 22-2440348
or Social Security No. _____

Is hereby granted permission to perform the following work:

- BUILDING PLUMBING OTHER DEMO
 ELECTRICAL FIRE PROTECTION
 ELEVATOR DEVICES

DESCRIPTION OF WORK:

REMOVAL & DEMO OF (1) 12600 GALLON
UNDERGROUND STORAGE TANK

NOTE: If construction does not commence within one (1) year of date of issuance, or
if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work \$ 8063.00

PAYMENTS (Office Use Only)	
Building	_____
Electrical	_____
Plumbing	_____
Fire Protection	_____
Elevator Devices	_____
Other <u>Demolition</u>	<u>200.00</u>
DCA Training Fee	<u>6.00</u>
Cert. of Occ.	_____
Other	_____
Total	<u>206.00</u>
Check No.	<u>4020214</u>
Cash	_____
Collected By:	<u>J.L.</u>

CONSTRUCTION OFFICIAL

(see reverse side)



**BUILDING
SUBCODE
TECHNICAL SECTION**



Date Received
Date Issued
Control #
Permit #

5/24/99
97848

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block _____ Lot _____

Work Site Location _____

Address _____

Owner in Fee _____

Address _____

Tele. (____) _____ **PERMIT REQUEST FORM**

Contractor **ASIE PRO TANK**

Address **5209 N MIL R'D**

PLATINUM NJ 08360

Tele. (____) _____

Lic. No. or Bldrs. Reg. No. _____

Federal Emp. No. **2440348** or Social Security No. _____

JOB SUMMARY (Office Use Only)

PLAN REVIEW Date Initial **INSPECTIONS**

- | | | | | | | |
|--|-------|-------|------------|---------|---------|-------------------|
| <input type="checkbox"/> No Plans Req. | _____ | _____ | Type: | Failure | Failure | Dates (Month/Day) |
| <input type="checkbox"/> All | _____ | _____ | Footing | _____ | _____ | Initial |
| <input type="checkbox"/> Footing | _____ | _____ | Foundation | _____ | _____ | |
| <input type="checkbox"/> Foundation | _____ | _____ | Slab | _____ | _____ | |
| <input type="checkbox"/> Frame | _____ | _____ | Frame | _____ | _____ | |
| <input type="checkbox"/> Other | _____ | _____ | Insulation | _____ | _____ | |

Joint Plan Review Required:

- Elec. Plumb. Fire

SUBCODE APPROVAL

- CO CCO CA

Date: _____

Approved By: _____ Final

	Date	Initial	Type:	Failure	Failure	Dates (Month/Day)
			Footing	_____	_____	
			Foundation	_____	_____	
			Slab	_____	_____	
			Frame	_____	_____	
			Insulation	_____	_____	
			Finishes:	_____	_____	
			Energy	_____	_____	
			Mechanical	_____	_____	
			TCO	_____	_____	
			Other	_____	_____	

B. BUILDING CHARACTERISTICS

Use Group Present _____ Proposed _____

Constr. Class Present _____ Proposed _____

No. of Stories _____

Height of Structure _____ Ft.

Area—Largest Floor _____ Sq. Ft.

New Bldg. Area/All Floors _____ Sq. Ft.

Volume of New Structure _____ Cu. Ft.

Total Land Area Disturbed _____ Sq. Ft.

Est. Cost of Bldg. Work:

1. New Bldg. \$ **8063.00**
2. Alteration \$ **163.00**
3. Total (1+2) \$ **8226.00**

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

[Signature]

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

**REMOVE (1) 12,000 GALLON UNDERGROUND
STORAGE TANK**

TYPE OF WORK:

- New Building
- Addition
- Alteration
- Roofing
- Siding
- Fence _____ Height (6' or over)
- Sign _____ Sq. Ft.
- Pool
- Asbestos Abatement
- Other **STORAGE TANK**
- Other _____
- Demolition

(Office Use Only)

Fee

\$ _____
\$ _____
\$ _____
\$ _____
\$ _____
\$ _____
\$ _____
\$ _____
\$ **200.00**

Paid <input checked="" type="checkbox"/> Check # 020214	Administrative Surcharge	\$ 200.00
Collected by: <i>[Signature]</i>	Minimum Fee	\$ 6.00
	DCA TRAINING FEE	\$ 6.00
	TOTAL FEE	\$ 206.00

APPENDIX IV

Underground Storage Tank Facility Questionnaire

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
 DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
 BUREAU OF APPLICABILITY AND COMPLIANCE
 Registration and Billing Unit
 CN 028, Trenton, N.J. 08625-0028
 1-609-984-3156

FOR STATE USE ONLY

Check In Yes

STATUS COMCODE
 Active Inactive

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

UNDERGROUND STORAGE TANK FACILITY QUESTIONNAIRE

FACILITY UST # 0058827

Completion of this Registration Questionnaire will satisfy the registration requirements of the Underground Storage of Hazardous Substances Act, N.J.S.A. 58:10A-21, and the Registration and Billing Regulations N.J.A.C. 7:14B-2.

(Check appropriate box(es))

- A. Is this a registration of a proposed or newly installed underground storage tank? (This form must be filed at least 30 days prior to operation)
- B. Is this a registration of an existing underground storage tank not presently registered?
- C. Is this a correction or amendment to an existing facility registration? UST # 0058827
- D. There have been no changes to the facility registration since last submittal. UST # _____ (Go to certification page for signatures)

If "C" is checked above, please check the appropriate type of change(s) below

Facility Name and/or Address Change
 Owner Name and/or Address Change
 Facility Operator and/or Address Change
 Owner Contact Person Change

Type of Product(s) Stored
 Spills, Leaks, Releases
 Tank(s) and/or Piping Changes
 Closure (Complete Question #13)

Financial Responsibility Change
 Substantial Modification(s)
 Sale or Transfer (Complete Questions 4,5,6 & 13D)
 Other (please specify)
tank capacity changed

SECTION A - GENERAL FACILITY INFORMATION

1. Facility Name O R T H O D I A G N O S T I C S Y S T E M I N C

2. Facility Location 1001 R OUT E 202 N ORTH
NUMBER AND STREET

R A R I T A N
CITY OR MUNICIPALITY

S O M E R S E T N J 08869 010131 0101014
COUNTY STATE ZIP CODE BLOCK LOT

3. Facility Operator ROBIN ROSEN PERSON OR TITLE Contact Tele. No. 9108701431613
(Area Code) (Extension)

Operator Address
(if different than
#2) NUMBER AND STREET

R A R I T A N
CITY OR MUNICIPALITY

N J 08869
STATE ZIP CODE

4. Tank Owner O R T H O D I A G N O S T I C S Y S T E M I N C

5. Tank Owner Address 1001 R OUT E 202 N ORTH
NUMBER AND STREET

R A R I T A N
CITY OR MUNICIPALITY

N J 08869
STATE ZIP CODE

Contact Person ROBIN ROSEN Contact 9108701431613
(Area Code) (Extension)
(Tank Owner)

7. EPA ID # N A

8. Total number of regulated underground storage tanks at facility 0001 (Complete Section B for each tank)

9. Total regulated underground storage tank capacity at facility (gallons) 0 0 1 0 0 0 0

10. Facility Type: A State C County/Municipal E Charitable / Public School G Other
 B Commercial/ D Federal F Residence H Farm (as defined in N.J.S.
 Industrial 54:4-23.1 et seq.)

11. Is a copy of the facility site plan submitted with this registration pursuant to N.J.A.C. 7:14B-2? YES NO**SECTION B - SPECIFIC TANK INFORMATION**

ALL underground tanks, including those taken out of operation (UNLESS THE TANK WAS REMOVED FROM THE GROUND PRIOR TO 9/3/86) must be registered. Report all tank/piping status changes unless previously submitted.

1. Tank Identification Number	TANK NO. <u>E 0 1 1</u>	TANK NO.	TANK NO.	TANK NO.	TANK NO.			
2. CAS Number (hazardous substances only)								
3. Date Tank Installed (Month/Day/Year)	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year			
4. Tank Size (gallons)	<u>0 1 0 0 0 0</u>							
5. Tank Contents (Mark one "X" for each tank)								
A. Leaded gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
B. Unleaded gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
C. Alcohol enriched gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
D. Light diesel fuel (No. 1-D)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
E. Medium diesel fuel (No. 2-D)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
F. Waste Oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
G. Kerosene (No. 1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
H. Home heating oil (No. 2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
J. Heating oil (No. 4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
K. Heavy heating oil (No. 6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
L. Aviation fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
M. Motor oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
N. Lubricating oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
P. Sewage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Q. Sewage sludge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
R. Other hazardous substances (specify)	<u>waste solvent</u>							
S. Hazardous waste (specify ID number)								
T. Mixtures (please specify)								
U. Emergency spill tank (specify substance)								
V. Other petroleum products (please specify)								
W. Other (please specify)								
6. Tank & Piping Construction (Mark one each for both tank & piping)	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>
A. Bare Steel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Cathodically protected steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Fiberglass-coated steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Fiberglass-reinforced plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Internally lined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Other (please specify)								
7. Tank & Piping Structure (Mark one each for both tank & piping)	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>
A. Single wall	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Double wall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Other (please specify)								
8. Type of Monitoring/Detection System (Mark all that apply for both tank & piping)	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>
A. Statistical Inventory Reconciliation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Manual Tank Gauging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Inventory Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Interstitial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Precision Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Ground water observation wells	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Vapor observation wells	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. In-tank (automatic) monitoring gauge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Periodic Tank Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Tank Identification Number	TANK NO. R 0 1 1		TANK NO.		TANK NO.		TANK NO.		TANK NO.	
8. Type of Monitoring/Detection System K. None	Tank <input checked="" type="checkbox"/>	Piping <input checked="" type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>
L. Other (please specify)										
9. Overfill Protection (tank only) (Mark one X for each tank)										
A. Yes	<input type="checkbox"/>									
B. No	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
10. Spill Containment Around Fill Pipe (Mark one X for each tank)										
A. Yes	<input type="checkbox"/>									
B. No	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
11. Tank Status (Mark one X for each tank)	Tank <input type="checkbox"/>	Piping <input type="checkbox"/>								
A. In-use	<input type="checkbox"/>									
B. Empty less than 12 months	<input type="checkbox"/>									
C. Empty 12 months or more	<input type="checkbox"/>									
D. Emergency spill tank (sump)	<input type="checkbox"/>									
E. Emergency backup generator tank	<input type="checkbox"/>									
F. Abandoned in Place	<input type="checkbox"/>									
G. Removed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Other (please specify)										
12. If box 11B, C, or D above has been marked, indicate the estimated date last used (month/day/year)	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>					
13. Closure Information - Tank ID No.	TANK NO. E 0 1 1		TANK NO.		TANK NO.		TANK NO.		TANK NO.	
A. Date abandoned in place	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>	Mo. <input type="text"/> Day <input type="text"/> Year <input type="text"/>
B. Date taken temporarily out of service	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>
C. Date removed	06 10 1997	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>
D. Date of Sale or Transfer	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>
E. TMS # (if applicable)										
F. ISRA # (if applicable)										

SECTION C - FINANCIAL RESPONSIBILITY

Does this facility have a Financial Responsibility Assurance Mechanism as required in 40 CFR 280? YES NO
Please list the appropriate financial information below:

self-insured

Type

Carrier / Issuing Agency

/ /
Effective Date

/ /
Expiration Date

\$ _____
Amount

SECTION D - MONITORING SYSTEMS

Does this facility have a release detection monitoring system which is in compliance with N.J.A.C. 7:14B-6?
"No", please be aware that the facility must meet the appropriate deadline. (See "Dates to Know" on Page 4)

YES NO

SECTION E - RECORDKEEPING/COMPLIANCE

Please answer all the questions in this section on a facility basis. Any one tank not in compliance requires a "NO" answer for the entire facility.

- Does this facility have cathodic protection systems for all steel tanks and piping?
If "Yes", are the systems properly operated and maintained pursuant to N.J.A.C. 7:14B-5?
 YES NO
 YES NO
 YES NO
- Are the performance claims and documentation of monitoring systems maintained by the owner or operator pursuant to N.J.A.C. 7:14B-5?
Are the proper monitoring, testing, sampling, repair and inventory records kept on-site pursuant to N.J.A.C. 7:14B-5 and 6?
 YES NO
 YES NO
 YES NO
- Is the proper Release Response Plan kept on-site pursuant to N.J.A.C. 7:14B-5?
 YES NO
 YES NO
 YES NO
 YES NO
- Does the facility have spill and over fill protection systems pursuant to N.J.A.C. 7:14B-4?
 YES NO
- Have all Fill Ports been permanently marked as per API #1637 pursuant to N.J.A.C. 7:14B-5?
 YES NO

IMPORTANT INFORMATION

FEE:

Please make checks payable to: "Treasurer, State of New Jersey". Use of the enclosed return envelope will expedite processing. Registration and Billing Schedule can be found in N.J.A.C. 7:14B.
All Initial Registration fees are \$100 per facility.

PENALTY:

Failure by owner or operator of a regulated underground storage tank to comply with any requirement of the State UST Act or regulations may result in the penalties set forth in N.J.S.A. 58:10A-10.

EMERGENCY:

If a discharge or spill occurs, the NJDEP Hotline at (609) 292-7172 must be called IMMEDIATELY - 24 hours a day.

UPGRADE EXEMPTION: Residential heating oil underground storage tanks are exempt from all upgrade requirements.

DATES TO KNOW (critical deadlines)

- December 22, 1988 — All new federally regulated tank systems must have cathodic protection and spill/overfill protection.
September 4, 1990 — All new State-only regulated tank systems must have cathodic protection and spill/overfill protection.
December 22, 1990 — All federally regulated piping must have begun leak detection.
February 19, 1993 — All federally regulated tank systems must maintain financial responsibility assurance.
December 22, 1993 — All federally regulated tank systems must have begun leak detection.
December 22, 1998 — All regulated tanks shall install cathodic protection and spill/overfill protection.

CERTIFICATIONS

NOTE: IF THE PERSON SIGNING CERTIFICATION NO. 2 IS THE SAME AS THE PERSON SIGNING CERTIFICATION NO. 1, THEN CERTIFICATION NO. 2 NEED NOT BE SIGNED. (If different persons are required to sign No. 1 and No. 2, then they must do so.)

CERTIFICATION NO. 1:

Must be signed by the highest ranking individual at the facility with overall responsibility

"I certify under penalty of law that the information provided in this document is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant civil and criminal penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

William Slimak

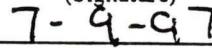
(Typed / Printed Name)



(Signature)

Director, Operations

(Title)



(Date)

CERTIFICATION NO. 2:

Must be signed as follows:

- For a corporation, by a principal executive officer of at least the level of vice president
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively
- For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official
- For persons other than indicated above, by the person with legal responsibility for the site

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil and criminal penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

(Typed / Printed Name)

(Signature)

(Title)

(Date)

CERTIFICATION NO. 3:

If applicable, must be signed by the individual who is certified to perform services.

"I certify under penalty of law that the information provided in this document is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant civil and criminal penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Deven Schmitt, Principal Engineer

(Typed / Printed Name)

(Title)



(Date)

McLaren/Hart, Inc.

(Name of Firm, if applicable)

0012273

(N.J. Certification Number)

APPENDIX V

Site Investigation/Remedial Investigation Report Checklist

**New Jersey Department of Environmental Protection
Site Remediation Program
Site Investigation/Remedial Investigation Report Checklist**

Oversight Document: UST Regulations Industrial Site Recovery Act (ISRA)
 Administrative Consent Order (ACO) Memorandum of Agreement (MOA)
 Memorandum of Understanding

A. Case Name (and AKA): Ortho Diagnostic Systems, inc. (ODSI)
Address: 1001 Route 202 North
Municipality/County: Township of Raritan Borough/Somerset County, New Jersey
RP Contact: Robin Rosen **Telephone:** (908) 704-3163

B. (Check as appropriate) <p><input checked="" type="checkbox"/> Site Investigation (SI) Report</p> <p><input type="checkbox"/> Remedial Investigation (RI) Report</p>	C. (Complete all that apply) <ul style="list-style-type: none"> • Assigned Case Manager _____ • ISRA Case Number _____ (5 digits) • UST Registration Number <u>0058827</u> (7 digits) • Incident Report Number _____-_____ (10 or 12 digits) _____ - _____ - _____ • Tank Closure Number C9 <u>7</u> - <u>0320</u> C9 - _____ C9 - _____ (7 characters) C9 - _____ C9 - _____ C9 - _____ • EPA ID Number NJ _____ (12 characters)
---	--

D. (Circle "Yes" or "No" as applicable for each statement. If the statement is not applicable, indicate "N/A")

1) All "Areas of Concern", as defined in N.J.A.C. 7:26E-1.8 or 40 CFR 300.5, noted in the attached report were sampled pursuant to N.J.A.C. 7:26E-3 and 4, and analyzed pursuant to Table 2-3, as applicable Yes No
 (If the answer to #1 is "No", answer 1A & 1B. If the answer is "Yes", go to #2)

A) Did the Department grant a variance from any of the requirements of N.J.A.C. 7:26E-2 through 6, pursuant to N.J.A.C. 7:26E-1.6(d)1 and 2? Yes No

B) If alternative sampling and/or investigatory methods were utilized without Department pre-approval, is the documentation required by N.J.A.C. 7:26E-1.6(c) provided? Yes No

2) The attached report documents all individual contaminants below most recently published residential and impact to ground water soil cleanup criteria contained in the "Site Remediation Newsletter" Yes No

3) The attached report includes results from a ground water investigation conducted pursuant to N.J.A.C. 7:26E-3.7 or 4.4. (If "No", go to question 5, if "Yes", answer question 4) Yes No

4) The attached report documents all individual contaminants below applicable Ground Water Quality Standards as contained in N.J.A.C. 7:9-6 Yes No

5) The attached report was submitted in response to a discharge of any contaminants as defined at N.J.A.C. 7:26E-1.8 Yes No
 If answer to #5 was "Yes" continue to 5A through 5E. If answer is "No" go to #6.
 Pursuant to N.J.A.C. 7:26E-3.7 and/or 4.4:

A) Was the discharge associated with a substance with a solubility greater than 100 milligrams per liter (i.e. gasoline, #2 heating oil etc.)? Yes No

B) Does all the soil between the discharge (last depth of contamination above remediation standard) and ground water/bedrock contain less than 15% silt and clay? Yes No

- C) If a soil sample was collected 2 feet from the saturated zone or bedrock, does it contain a contaminant above the impact to ground water remediation criteria? Yes No
- D) Are any of the soil sampling results above the impact to ground water remediation criteria anywhere in the soil column and the contaminant is not going to be actively remediated? Yes No
- E) Was a sheen or product noted on the ground water? Yes No
- 6) Were any wastes generated for disposal during the SI or RI? Yes No
- A) The attached contains a "soil reuse" proposal or report, including characterization sampling, as requested in the May 14, 1993, "Management of Excavated Soils" guidance document Yes No
- B) The attached report contains a request for a Waste Flow Exemption Yes No
- C) The attached report contains documentation of the quantity, waste classification and status of all excavated soil/waste disposal (including drum contents, tank sludge/rinsate, overburden soils, etc.) remediation or reuse and clean fill documentation Yes No

Site Investigation (SI) and Remedial Investigation (RI) Report Submittal Checklist

(Note page, figure, table or plate number(s) or NA for Not Applicable)

E. SI Reporting Requirements

- 1) Historical Information (including maps and air photos) Pg. No. 1-4
- 2) Physical Setting Pg. No. 1-4
- 3) Technical Overview of investigation execution and results including reliability of lab data, summary of contamination, information on waste characterization and any other significant events Pg. No. 2-1
- 4) Findings and recommendations by Area of Concern (AOC) Pg. No. 3-1
 - A) Description of each AOC including size (i.e. size of drum pad, volume of impoundment or area, length of UST and piping), suspected and actual contamination (presence of discoloration, stressed vegetation, corrosion holes in USTs, description of the excavation, if any), source or potential source of discharge and field measurements Pg. No. 3-1
 - B) Results of Analyses Pg. No. Tables 3, 4, 5
 - C) Fully supported Recommendation for additional remedial activities or "No Further Action" Pg. No. 3-9
- 5) Summary Table of analytical methods and quality assurance indicators pursuant to N.J.A.C. 7:26E-2.2 (a)1v Pg. No. App. IX
- 6) Laboratory Quality Assurance and Quality Control Deliverables pursuant to N.J.A.C. 7:26E-2.1 and Appendix A (include lab deliverable checklist) Pg. No. App. IX
 - A) Nonconformance Summary signed by the Laboratory Pg. No. _____
 - B) Chain of Custody Pg. No. _____
- 7) Discussion of why the analytical methods chosen for each sample matrix accurately represent all of the contaminants of concern at the facility Pg. No. 2-1
- 8) Table summarizing sampling results, including media, sampling depth, field and laboratory identification numbers, date and time of sampling, analytical results, and comparison to applicable remediation standards (ARS). Identify all samples exceeding ARS and all samples with MDLs or PQIs exceeding ARS. Solid results on dry weight basis (in mg/Kg) and aqueous samples in ug/l Pg. No. 3-8 to 3-4 to 3-8
- 9) Scaled Site map and AOC base map(s) with sample locations, sample depth and contaminant levels. (see N.J.A.C. 7:26E-3.10 (d)1 or 4.9 (d)2 for map details) Pg. No. 2-2
- 10) Boring/Stratiographic logs including instrument readings and physical characteristics Pg. No. N/A
- 11) Boring/Stratiographic cross sections Pg. No. N/A
- 12) Boring, piezometer and monitoring well records with applicable permit numbers Pg. No. N/A

F. RI Reporting Requirements (Include all items above plus the following.)

- 13) Additional information collected pursuant to N.J.A.C. 7:26E-4.1 and any work plan approved per N.J.A.C. 7:26E-4.8 (i.e. well search information results/summary, subsurface gas threats, investigation of sediment, surface water, wetlands), as applicable Pg. No. N/A
- 14) Well Search Results (pursuant to 7:26E-4.4(h) and Appendix B) Pg. No. N/A
- 15) Description of treatability bench scale or pilot studies as well as data to develop permit limits for air, surface water and/or ground water discharges Pg. No. N/A
- 16) Average contaminant concentrations for each AOC (see N.J.A.C. 7:26E-4.9 (c)3i), and a description of the procedures used for averaging Pg. No. N/A
- 17) Well casing and ground water elevations (include well Certifications A and B) Pg. No. N/A
- 18) Ground water temperature, pH and conductivity measurements Pg. No. N/A
- 19) Review of inventory control records to identify product loss Pg. No. N/A
- 20) Results of an Ecological Assessment, if conducted Pg. No. N/A
- 21) Summary of Landfill records, if site is a landfill Pg. No. N/A
- 22) Site base maps with sampling locations* and diagrams shall include:
 - A) ground water elevation contour maps with flow direction, and tidal studies, if applicable Pg. No. N/A
 - B) top of bedrock contour map, if bedrock was encountered Pg. No. N/A
 - C) contaminant isopleth maps for ground water showing horizontal/vertical extent of contamination above applicable standards, and free product Pg. No. N/A
 - D) isopleth maps for soil contaminants (required if more than 25 soil samples collected; suggested for fewer than 25 samples) Pg. No. N/A
 - E) horizontal and vertical distribution of contaminants in soil and sediment with sample numbers* and contaminant concentrations Pg. No. N/A
 - F) all ground water sampling points* including open hole and screened intervals Pg. No. N/A
 - G) if applicable, a map of surface water, structure and airborne contaminants Pg. No. N/A
 - H) photos may be submitted of sample locations (identify photo location on site map) Pg. No. N/A
 - I) other data collected (e.g. soil gas), specify type Pg. No. N/A

*NOTE: The same alpha/numeric sample label used in the RI workplan shall be used in the RI Report

G. Report Contents Completeness and Two Part Certification:

- 23) The attached report conforms to the specific reporting requirements listed at N.J.A.C. 7:26E-3.10 for a SI Report or N.J.A.C. 7:26E-4.9 for a RI Report Yes No

Name: Paul Corbett Signature: Paul Corbett UST Cert. No. 0010221

Firm: McLaren/Hart Firm's UST Certification Number: US 00268

(NOTE: Certification numbers required only if work was conducted on USTs regulated per N.J.S.A. 58:10A-21 et seq.)

- 24) Two part certification signed and completed pursuant to one of the following requirements (indicate the page number next to the appropriate regulatory citation):

- A) N.J.A.C. 7:26C-1.2 Pg. No. _____
- B) N.J.A.C. 7:14B-2.3 Pg. No. _____
- C) N.J.A.C. 7:26B-1.13 Pg. No. _____

New Jersey Department of Environmental Protection

Site Remediation Program

Instructions for the Site Investigation and Remedial Investigation Report Checklist

NOTICE: This document is being distributed in DRAFT form as a pilot project. Please use as a transmittal form when submitting SI and RI reports and feel free to suggest changes or improvements. Once the pilot project has been completed, a final document incorporating any appropriate changes will be distributed via the *Site Remediation News*.

The Site Investigation (SI) and Remedial Investigation (RI) Report Checklist has been prepared to assist the regulated community in preparing complete reports pursuant to the "Technical Requirements for Site Remediation, N.J.A.C. 7:26E. Ensuring a complete and quality submittal will accomplish the goals of a more efficient and effective remedial process by providing:

- a) predictability in Department reporting requirements which are based in law and regulation;
- b) a quicker review by the Department;
- c) less cost to the regulated community; and
- d) more expeditious site cleanup.

Please note the prepared checklist should only be used as a guide. The actual regulations must be consulted to ensure a complete and thorough submittal. For copies of N.J.A.C. 7:26E please contact the Office of Administrative Law at (609) 588-6606.

Oversight Document – Indicate under which regulatory program the site is being addressed. More than one regulatory program may be involved at one site.

Section A – Complete the address and name of the site under investigation.

Section B – Check the type of report submitted.

Section C – Be sure to include all applicable case numbers, and note the assigned case manager, if known. This will assist in the proper routing of the document.

Section D – The statements included in this section will assist the regulated community and the Department in determining the presence or absence of contamination, the need for additional investigation and whether proper waste disposal was accomplished. The statements are key components of the Technical Regulations which should be referenced for specific details. These details include the definition of Areas of Concern (N.J.A.C 7:26E-1.8 or 40 CFR 300.5), sampling requirements (N.J.A.C. 7:26E-3 and 4) and the ground water investigation triggers (N.J.A.C. 7:26E-3.7 and/or 4.4). Also, the statements reference the Soil Cleanup Criteria, the Ground Water Quality Standards and the "Management of Excavated Soils" guidance document.

Sections E and F – This is the completeness checklist and page number reference for SI Reports (Section E) and RI Reports (Sections E and F.) Page numbers are requested to assist the Department in targeting specific components of the document in an expedited manner. If an item is not required for the site under investigation, "NA" (not applicable) should be noted. For an RI Report, all the components listed under the SI Report requirements should be included. Please note that the Technical Rules allow for single phased RI's and remedial action (i.e. discolored soil removal followed by post-excavation sampling, UST tank removal, etc.) In this instance, the report submitted must also address the requirements specified at N.J.A.C 7:26E-6.6 (Remedial Action Report).

Section G – This is the final completeness checkoff, including the signature of the individual and firm insuring completeness. If applicable, the Underground Storage Tank Certification Numbers for the individual and firm should be referenced. Also indicate the page number and regulatory citation for the two part certification.

APPENDIX VI

QA/QC and Chain of Custody

**QA/QC Review of Volatiles Data for
Envirotech Research, Inc. Job# V393**

Holding Times: Samples were analyzed within NJDEP holding times.

GC/MS Tuning and Mass Calibration: All BFB tuning criteria were within control limits.

Initial Calibration: All SPCCs and CCCs were within control limits.

All target compounds had an average RRF above the allowable minimum (0.050) and had %RSDs below the allowable maximum (30%) as required.

Continuing Calibration: All SPCCs and CCCs were within control limits.

All target compounds had RRF20s above the allowable minimum (0.050) as required. Chloromethane (32.0%), bromomethane (46.0%), and chloroethane (28.0%) had %Ds above the allowable maximum (25%) on 06-13-97 (C3057). Results for these compounds should be considered estimates in associated samples.

Blanks: Method blank AV164 contained methylene chloride (6.6 ug/kg). Method blank CV164B contained methylene chloride (130 ug/kg). Results for methylene chloride less than or equal to three times the blank level should be considered not detected (U) in associated samples. If the concentration is greater than three times but less than or equal to five times the blank level, the "B" qualifier should be added and the recommendation made to resample and reanalyze the sample. If the concentration is greater than five times the blank level it should be considered estimated and the "B" qualifier added.

Internal Standard Area Summary: All internal standard areas and retention times were within control limits.

Surrogate Recovery: All surrogate recoveries were within control limits.

Matrix Spike/Matrix Spike Duplicate: The soil MS/MSD sample 95806 had all relative percent differences and percent recoveries within QC limits.

Compound ID: All positive hit compounds contained the primary and secondary ions in their mass spectra as specified in the method.

**QA/QC Review of Semi-Volatiles (B/N's only) Data
for Envirotech Research, Inc. Job# V393**

Holding Times: Samples were extracted and analyzed within NJDEP holding times.

GC/MS Tuning and Mass Calibration: All DFTPP tuning criteria were within control limits.

Initial Calibration: All SPCCs and CCCs were within control limits.

All target base/neutral compounds had average RRFs above the allowable minimum (0.050) and had %RSDs below the allowable maximum (30%) as required.

Continuing Calibration: All SPCCs and CCCs were within control limits.

All target compounds had RRF50s above the allowable minimum (0.050). Hexachlorocyclopentadiene (30.0%) had %Ds above the allowable maximum (25%) on 06-19-97 (T1497). Results for hexachlorocyclopentadiene should be considered estimates.

Blanks: The method blank reported all target compounds as not detected.

Internal Standard Area Summary: All environmental samples had internal standard areas and retention times within control limits.

Surrogate Recovery: All surrogate recoveries were within control limits.

Matrix Spike/Matrix Spike Duplicate: MS/MSD sample 95445 had all relative percent differences and percent recoveries within QC limits.

Compound ID: All positive hit compounds contained the primary and secondary ions in their mass spectra as specified in the method.

**QA/QC Review of Total Petroleum Hydrocarbons (TPH)
Data for Envirotech Research Job# V393**

Holding Times: Samples were analyzed within NJDEP holding times.

Initial Calibration: The calibration curve had a correlation coefficient (0.9999) greater than 0.995 as required.

Blanks: The laboratory blank reported target TPH as not detected.

Spike Sample Recovery: TPH (83.4% and 89.3%) had percent recoveries within QC limits (74.5-118%) for MS/MSD sample 97189.

Duplicates: TPH (5.8%) had a %RPD below the allowable maximum (35%) for MS/MSD sample 97189.

Laboratory Control Sample: TPH (92.0%) had a percent recovery within control limits (80-120%) for the soil LCS.

TPH

Date: 6/13/97

x range	y range
40.64	0.776
20.32	0.393
8.124	0.159
0.812	0.016
0.406	0.007

Slope: 0.019105
Intercept: 0.001576
Cor. Coef.: 0.999969

ENVIROTECH RESEARCH INC.

777 New Durham Road
 Edison, New Jersey 08817
 Phone: (908) 549-3900 Fax: (908) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

PAGE ____ OF ____

Name (for report and invoice) MARC CICALESE	Samplers Name (Printed) Paul Cicalese	Site/Project Identification Ortho Diagnostic Systems Inc						
Company MCCLAREN / HALT	P.O. #	State (Location of site): NJ: <input type="checkbox"/> NY: <input type="checkbox"/> Other:						
Address 25 INDEPENDENCE BLVD.	Regulatory Program:							
City WARREN	Analysis Turnaround Time Standard <input checked="" type="checkbox"/> BN+15	ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUESTED)						
State NJ	Rush Charges Authorized For: 2 Week <input type="checkbox"/> 1 Week <input type="checkbox"/> Other <input checked="" type="checkbox"/> 24 HR TAT	PPVC+10 <input type="checkbox"/> X TPH <input type="checkbox"/> X BN+15 <input type="checkbox"/> X						
Zip 07059								
Phone 608 647-8111								
Fax 908 647-8115								
Sample Identification	Date	Time	Matrix	No. of Cont.	PPVC+10	TPH	BN+15	Sample Numbers
PX-1	6-11-97	1830	SOIL	2	X	X		96866
PX-2	6-11-97	1840	SOIL	2	X	X		96867
PX-3	6-11-97	1845	SOIL	2	X	X		96868
PX-4	6-11-97	1850	SOIL	2	X	X		96869
PX-5	6-11-97	1855	SOIL	2	X	X		96870
PX-6	6-11-97	1905	SOIL	2	X	X		96871
PX-7	6-11-97	1910	SOIL	2	X	X		96872
PX-8	6-11-97	1915	SOIL	2	X	X		96873
<i>24 HR TAT Verbal for PPVC+10 + TPH / See special instructions</i>								<i>OS 6-12-97</i>
Preservation Used: 1 = ICE, 2 = HCl, 3 = H ₂ SO ₄ , 4 = HNO ₃ , 5 = NaOH				Soil:	1	1		Tuesday, 6-17-97 OS 6-12-97
6 = Other _____, 7 = Other _____				Water:				

Special Instructions *Analyze 25% of highest TPH detections for BN+15 - Confirm with P.M.*

Water Metals Filtered (Yes/No)?

Relinquished by 1) Deborah Schell	Company McLaren / Halt	Date / Time 6/12/97 3:00	Received by Em 2	Company Envirotech
Relinquished by 2) Em 2	Company Envirotech	Date / Time 6/12/97 3:15	Received by 2) Diana Shamy	Company DIANE SHAMY ENVIROTECH RESEARCH, INC.
Relinquished by 3)	Company	Date / Time 1	Received by 3)	Company
Relinquished by 4)	Company	Date / Time 1	Received by 4)	Company

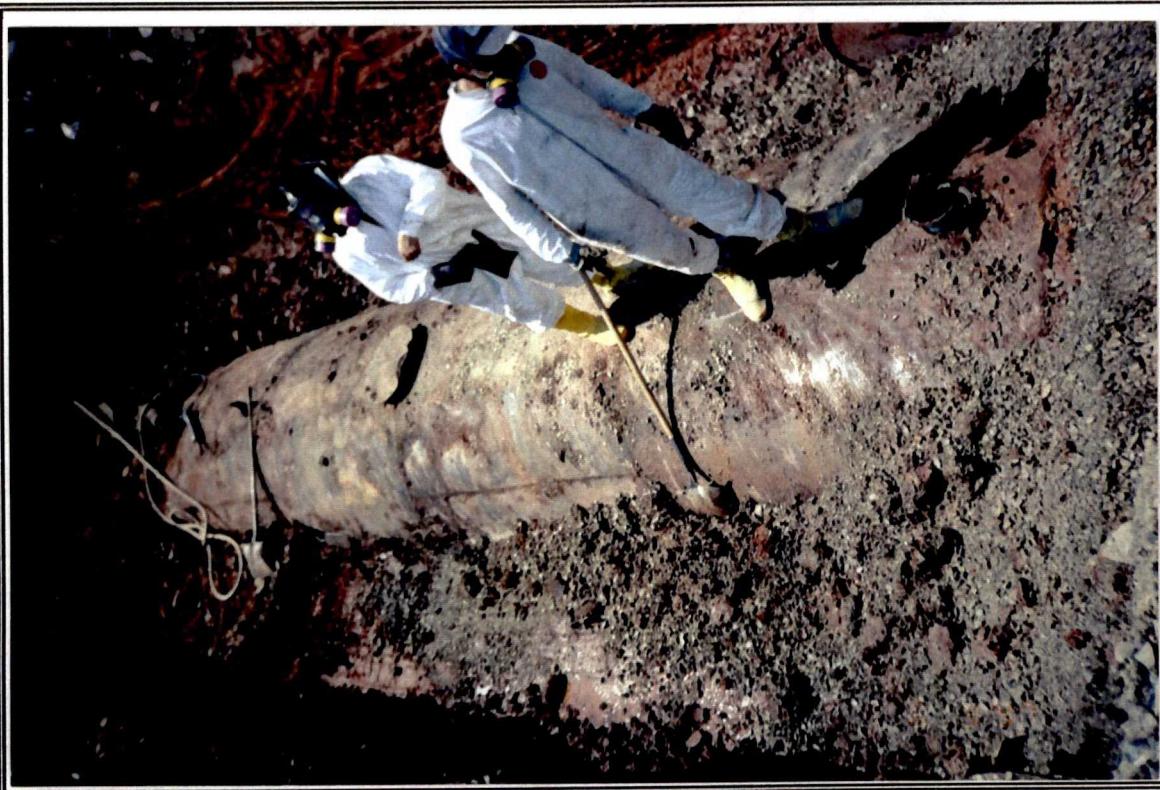
Laboratory Certifications: New Jersey (12543), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

APPENDIX VII

UST Removal Photograph Log



Photograph № 1: Exposing the 10,000 Gal. UST with Excavator.



Photograph № 2: Exposed 10,000 Gal. UST.



Photograph № 3: Removing Liquids from 10,000 Gal. UST Using a Vacuum Truck.



Photograph № 4: Opened Manhole Located in the Middle of the 10,000 Gal. UST.



Photograph N° 5: Sample of 10,000 Gal. UST Contents Being Inspected.



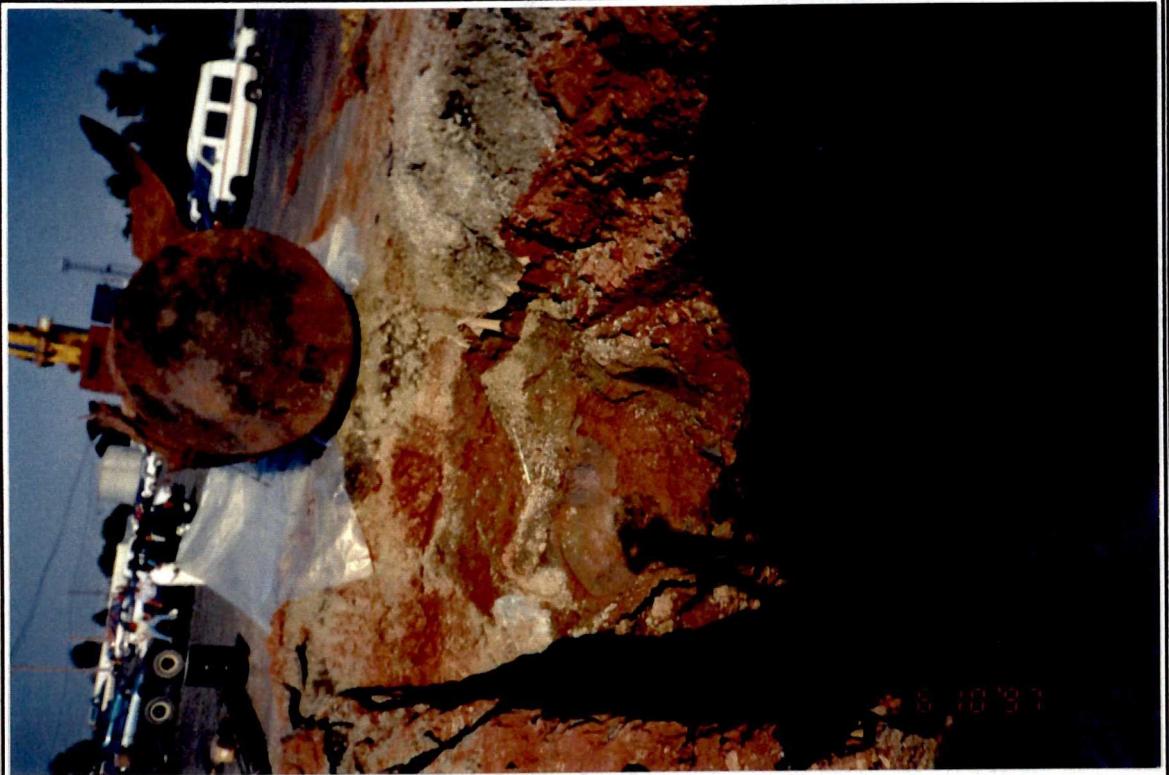
Photograph N° 6: Opened UST, Exposing Tank Contents.



Photograph № 7: Tank Contents Being Removed Using Excavator.



Photograph № 8: Side of 10,000 Gal. UST Showing Metal Tie-Downs.



Photograph № 9: 10,000 Gal. UST Being Removed from Excavation.



Photograph № 10: Pitted Area of 10,000 Gal. UST.



Photograph № 11: Interior View of UST Showing Deterioration at West Seam.



Photograph № 12: West Seam of 10,000 Gal. UST Showing Large Hole.



Photograph № 13: Excavation after 10,000 Gal. UST was Removed.



Photograph № 14: Cleaned 10,000 Gal. UST.



Photograph N° 15: Concrete Pad at Base of Excavation.



Photograph N° 16: Backfilling of Excavation - Stone, Geotextile Fabric, and Free Product Pipe.



Photograph № 17: Backfilling of Excavation with Clean Fill Using Compaction Equipment.



Photograph № 18: Post 10,000 Gal. UST Removal and Backfilling to Grade.

APPENDIX VIII

Tank Disposal Affidavit

CASIE / PROTANK

CERTIFICATE OF NON-HAZARDOUS VESSEL

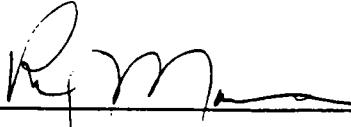
Site: Ortho Disgnostic Systems
1001 US Hwy 202
Raritan, NJ

Re: (1) 10,000 gallon UST with traces of chloroform -
tetrachloroethylene - benzene

Dear Sirs:

This letter is to confirm that the vessel at the above location has been cut, cleaned, degreased, water washed and the hazardous material contained within left on site - to be disposed of at a later date. Work done on 6/10/97.

SIGNATURE OF CERTIFICATION



CASIE / PROTANK

CERTIFICATE OF DESTRUCTION OF VESSEL

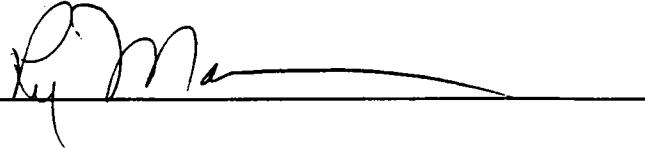
Ortho Diagnostic Systems
1001 US Hwy 202
Raritan, NJ

RE: (1) 10,000 gal UST tank which contained traces of
chloroform, tetrachloroethylene & benzene

Dear Sirs:

This letter is to confirm that the above vessel has been cut,
degreased, water washed and the hazardous material
contained within has been left on site in rolloffs & will be
disposed of at a later date. Tank cleaned on June 10, 1997.

SIGNATURE OF CERTIFICATION



APPENDIX IX

Analytical Results Reports

ENVIROTECH RESEARCH, INC.

777 New Durham Road
Edison, New Jersey 08817
Tel: (732) 549-3900
Fax: (732) 549-3679

June 24, 1997

McLaren Hart
25 Independence Blvd.
Warren, NJ 07059

Attention: Mr. Marc E. Cicalese

Re: Job No. V393 - Ortho Diagnostics

Dear Mr. Cicalese:

Enclosed are the results you requested for the following sample(s) received at our laboratory on June 12, 1997:

<u>Lab No.</u>	<u>Client ID</u>	<u>Analysis Required</u>
96866	PX-1	PP VOA+10, PP BN+15, PHC
96867	PX-2	PP VOA+10, PHC
96868	PX-3	PP VOA+10, PHC
96869	PX-4	PP VOA+10, PHC
96870	PX-5	PP VOA+10, PP BN+15, PHC
96871	PX-6	PP VOA+10, PHC
96872	PX-7	PP VOA+10, PHC
96873	PX-8	PP VOA+10, PHC

If you have any questions please contact your Project Manager, Kevin Hoogerhyde, at (908) 549-3900.

Very truly yours,


Michael J. Urban
Laboratory Manager

ENVIROTECH RESEARCH, INC.

TABLE OF CONTENTS

	<u>Section</u>	<u>Page</u>
Analytical Results Summary	1	1
General Information	2	
Chain of Custody	24	
Laboratory Chronicles	25	
Methodology Review	33	
Data Reporting Qualifiers	36	
Non-Conformance Summary	37	
GC/MS Forms and Data	3	
Results Summary and Chromatograms	39	
Tuning Results Summary	179	
Method Blank Results Summary	205	
Calibration Summary	229	
Surrogate Compound Recovery Summary	251	
Spike Recovery Summary	254	
Internal Standard Area Summary	256	
Petroleum Hydrocarbon Forms and Data	4	
Analytical Results Summary	260	
MS/MSD and Blank Results Summary	261	
IR Spectra	262	

ENVIROTECH RESEARCH, INC.

Client ID: PX-1
Site: Ortho Diagnostics

Lab Sample No: 96866
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c3061.d

Matrix: SOIL
Level: HIGH
Sample Weight: 4.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 10

**VOLATILE ORGANICS - GC/MS
METHOD 8240B**

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
Chloromethane	ND	140
Bromomethane	ND	140
Vinyl Chloride	ND	140
Chloroethane	ND	140
Methylene Chloride	400 BU	140
Acetone	ND	700
Trichlorofluoromethane	ND	140
1,1-Dichloroethene	ND	140
1,1-Dichloroethane	ND	140
trans-1,2-Dichloroethene	ND	140
cis-1,2-Dichloroethene	ND	140
Chloroform	ND	140
1,2-Dichloroethane	ND	140
1,1,1-Trichloroethane	ND	140
Carbon Tetrachloride	ND	140
Bromodichloromethane	ND	140
1,2-Dichloropropane	ND	140
cis-1,3-Dichloropropene	ND	140
Trichloroethene	ND	140
Dibromochloromethane	ND	140
1,1,2-Trichloroethane	ND	140
Benzene	280	140
trans-1,3-Dichloropropene	ND	140
2-Chloroethyl Vinyl Ether	ND	140
Bromoform	ND	140
Tetrachloroethene	ND	140
1,1,2,2-Tetrachloroethane	ND	140
Toluene	ND	140
Chlorobenzene	ND	140
Ethylbenzene	ND	140
Xylene (Total)	ND	140

ENVIROTECH RESEARCH, INC.Client ID: PX-1
Site: Ortho DiagnosticsLab Sample No: 96866
Lab Job No: V393Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c3061.dMatrix: SOIL
Level: HIGH
Sample Weight: 4.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 10.4**VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B**

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. C10H22 Alkane	14.95	780	
2. C11H24 Alkane	15.76	2400	
3. Trimethylbenzene isomer	15.93	1400	
4. C10H20 Cycloalkane	16.19	3700	
5. Unknown Alkane	16.35	880	
6. C11H24 Alkane	16.68	4000	
7. Decahydronaphthalene isomer	16.83	2300	
8. Ethyldimethylbenzene isomer	17.02	2000	
9. Decahydromethylnaphthalene isomer	17.52	2100	
10. C12H26 Alkane	17.84	1300	
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

20860

ENVIROTECH RESEARCH, INC.

Client ID: PX-1
Site: Ortho Diagnostics

Lab Sample No: 96866
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1499.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0
% Moisture: 10

**SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270B**

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
N-Nitrosodimethylamine	ND	740
bis(2-Chloroethyl)ether	ND	740
1,3-Dichlorobenzene	ND	740
1,4-Dichlorobenzene	ND	740
1,2-Dichlorobenzene	ND	740
bis(2-chloroisopropyl)ether	ND	740
N-Nitroso-di-n-propylamine	ND	740
Hexachloroethane	ND	740
Nitrobenzene	ND	740
Isophorone	ND	740
bis(2-Chloroethoxy)methane	ND	740
1,2,4-Trichlorobenzene	ND	740
Naphthalene	67	37
Hexachlorobutadiene	ND	740
Hexachlorocyclopentadiene	ND	740
2-Chloronaphthalene	ND	740
Dimethylphthalate	ND	740
Acenaphthylene	ND	37
2,6-Dinitrotoluene	ND	740
Acenaphthene	ND	37
2,4-Dinitrotoluene	ND	740
Diethylphthalate	ND	740
4-Chlorophenyl-phenylether	ND	740
Fluorene	ND	37
N-Nitrosodiphenylamine	ND	740
4-Bromophenyl-phenylether	ND	740
Hexachlorobenzene	ND	740
Phanthrene	ND	37
Anthracene	ND	37
Di-n-butylphthalate	ND	740
Fluoranthene	ND	37
Pyrene	ND	37
Benzidine	ND	1500
Butylbenzylphthalate	ND	740

ENVIROTECH RESEARCH, INC.

Client ID: PX-1
Site: Ortho Diagnostics

Lab Sample No: 96866
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1499.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0
% Moisture: 10

**SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270B**

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg <u>(Dry Weight)</u>	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
3,3'-Dichlorobenzidine	ND	1500
Benzo(a)anthracene	ND	37
Chrysene	ND	37
bis(2-Ethylhexyl)phthalate	200 J	740
Di-n-octylphthalate	ND	740
Benzo(b)fluoranthene	ND	37
Benzo(k)fluoranthene	ND	37
Benzo(a)pyrene	ND	37
Indeno(1,2,3-cd)pyrene	ND	37
Dibenz(a,h)anthracene	ND	37
Benzo(g,h,i)perylene	ND	37

ENVIROTECH RESEARCH, INC.

Client ID: PX-1
Site: Ortho Diagnostics

Lab Sample No: 96866
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1499.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0
% Moisture: 10.4

**SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270B**

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Decane	12.56	6000	
2. C10H20 Cycloalkane	13.10	2200	
3. C10H14 Aromatic/ Unknown Alkane	13.32	2500	
4. Unknown Alkane	13.43	2200	
5. Unknown Alkane	13.52	3300	
6. C10H14 Aromatic	13.77	2000	
7. Undecane	13.87	9700	
8. Unknown Aromatic	13.96	1800	
9. Dodecane	15.00	2100	
10. C11H24 Alkane	15.73	940	
11. C15H32 Alkane	16.72	1500	
12. Tetradecane	16.94	1300	
13. Unknown Alkane	17.48	3100	
14. Eicosane	19.01	1200	
15. Unknown Alkane	19.45	2800	
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

42640

ENVIROTECH RESEARCH, INC.

Client ID: PX-2
Site: Ortho Diagnostics

Lab Sample No: 96867
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c3062.d

Matrix: SOIL
Level: HIGH
Sample Weight: 4.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 11

**VOLATILE ORGANICS - GC/MS
METHOD 8240B**

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
Chloromethane	ND	140
Bromomethane	ND	140
Vinyl Chloride	ND	140
Chloroethane	ND	140
Methylene Chloride	280 BU	140
Acetone	ND	700
Trichlorofluoromethane	ND	140
1,1-Dichloroethene	ND	140
1,1-Dichloroethane	ND	140
trans-1,2-Dichloroethene	ND	140
cis-1,2-Dichloroethene	ND	140
Chloroform	ND	140
1,2-Dichloroethane	ND	140
1,1,1-Trichloroethane	ND	140
Carbon Tetrachloride	ND	140
Bromodichloromethane	ND	140
1,2-Dichloropropane	ND	140
cis-1,3-Dichloropropene	ND	140
Trichloroethene	ND	140
Dibromochloromethane	ND	140
1,1,2-Trichloroethane	ND	140
Benzene	ND	140
trans-1,3-Dichloropropene	ND	140
2-Chloroethyl Vinyl Ether	ND	140
Bromoform	ND	140
Tetrachloroethene	ND	140
1,1,2,2-Tetrachloroethane	ND	140
Toluene	ND	140
Chlorobenzene	ND	140
Ethylbenzene	ND	140
Xylene (Total)	150	140

ENVIROTECH RESEARCH, INC.

Client ID: PX-2
Site: Ortho Diagnostics

Lab Sample No: 96867
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c3062.d

Matrix: SOIL
Level: HIGH
Sample Weight: 4.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 11.0

**VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B**

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. C11H24 Alkane	15.76	2100	
2. Trimethylbenzene isomer	15.95	1900	
3. C10H20 Cycloalkane	16.21	3700	
4. Ethylmethylbenzene isomer	16.43	1500	
5. C11H24 Alkane	16.69	4700	
6. Decahydronaphthalene isomer	16.85	2400	
7. Tetramethylbenzene isomer	17.03	2400	
8. Decahydromethylnaphthalene isomer	17.55	1800	
9. Tetramethylbenzene isomer	17.62	1200	
10. Unknown Alkane	17.84	1300	
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

23000

ENVIROTECH RESEARCH, INC.

Client ID: PX-3
Site: Ortho Diagnostics

Lab Sample No: 96868
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9459.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 10

**VOLATILE ORGANICS - GC/MS
METHOD 8240B**

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
Chloromethane	ND	1.1
Bromomethane	ND	1.1
Vinyl Chloride	ND	1.1
Chloroethane	ND	1.1
Methylene Chloride	22 BU	1.1
Acetone	18	5.6
Trichlorofluoromethane	ND	1.1
1,1-Dichloroethene	ND	1.1
1,1-Dichloroethane	ND	1.1
trans-1,2-Dichloroethene	ND	1.1
cis-1,2-Dichloroethene	ND	1.1
Chloroform	ND	1.1
1,2-Dichloroethane	ND	1.1
1,1,1-Trichloroethane	ND	1.1
Carbon Tetrachloride	ND	1.1
Bromodichloromethane	ND	1.1
1,2-Dichloropropane	ND	1.1
cis-1,3-Dichloropropene	ND	1.1
Trichloroethene	ND	1.1
Dibromochloromethane	ND	1.1
1,1,2-Trichloroethane	ND	1.1
Benzene	0.8J	1.1
trans-1,3-Dichloropropene	ND	1.1
2-Chloroethyl Vinyl Ether	ND	1.1
Bromoform	ND	1.1
Tetrachloroethene	ND	1.1
1,1,2,2-Tetrachloroethane	ND	1.1
Toluene	ND	1.1
Chlorobenzene	ND	1.1
Ethylbenzene	ND	1.1
Xylene (Total)	ND	1.1

ENVIROTECH RESEARCH, INC.

Client ID: PX-3
Site: Ortho Diagnostics

Lab Sample No: 96868
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9459.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 10.3

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Ethane, 1,1,2-trichloro-1,2,2-trifluor	6.01	20	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

20

ENVIROTECH RESEARCH, INC.

Client ID: PX-4
Site: Ortho Diagnostics

Lab Sample No: 96869
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9460.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 15

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Chloromethane	ND	1.2
Bromomethane	ND	1.2
Vinyl Chloride	ND	1.2
Chloroethane	ND	1.2
Methylene Chloride	28 BQ	1.2
Acetone	19	5.9
Trichlorofluoromethane	ND	1.2
1,1-Dichloroethene	ND	1.2
1,1-Dichloroethane	ND	1.2
trans-1,2-Dichloroethene	ND	1.2
cis-1,2-Dichloroethene	ND	1.2
Chloroform	ND	1.2
1,2-Dichloroethane	ND	1.2
1,1,1-Trichloroethane	ND	1.2
Carbon Tetrachloride	ND	1.2
Bromodichloromethane	ND	1.2
1,2-Dichloropropane	ND	1.2
cis-1,3-Dichloropropene	ND	1.2
Trichloroethene	ND	1.2
Dibromochloromethane	ND	1.2
1,1,2-Trichloroethane	ND	1.2
Benzene	ND	1.2
trans-1,3-Dichloropropene	ND	1.2
2-Chloroethyl Vinyl Ether	ND	1.2
Bromoform	ND	1.2
Tetrachloroethene	ND	1.2
1,1,2,2-Tetrachloroethane	ND	1.2
Toluene	ND	1.2
Chlorobenzene	ND	1.2
Ethylbenzene	ND	1.2
Xylene (Total)	ND	1.2

ENVIROTECH RESEARCH, INC.

Client ID: PX-4
Site: Ortho Diagnostics

Lab Sample No: 96869
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9460.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 14.9

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Ethane, 1,1,2-trichloro-1,2,2-trifluor	6.07	28	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

28

ENVIROTECH RESEARCH, INC.

Client ID: PX-5
Site: Ortho Diagnostics

Lab Sample No: 96870
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9461.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 12

**VOLATILE ORGANICS - GC/MS
METHOD 8240B**

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
Chloromethane	ND	1.1
Bromomethane	ND	1.1
Vinyl Chloride	ND	1.1
Chloroethane	ND	1.1
Methylene Chloride	27 BQ	1.1
Acetone	15	5.7
Trichlorofluoromethane	ND	1.1
1,1-Dichloroethene	ND	1.1
1,1-Dichloroethane	ND	1.1
trans-1,2-Dichloroethene	ND	1.1
cis-1,2-Dichloroethene	ND	1.1
Chloroform	ND	1.1
1,2-Dichloroethane	ND	1.1
1,1,1-Trichloroethane	ND	1.1
Carbon Tetrachloride	ND	1.1
Bromodichloromethane	ND	1.1
1,2-Dichloropropane	ND	1.1
cis-1,3-Dichloropropene	ND	1.1
Trichloroethene	ND	1.1
Dibromochloromethane	ND	1.1
1,1,2-Trichloroethane	ND	1.1
Benzene	ND	1.1
trans-1,3-Dichloropropene	ND	1.1
2-Chloroethyl Vinyl Ether	ND	1.1
Bromoform	ND	1.1
Tetrachloroethene	1.0J	1.1
1,1,2,2-Tetrachloroethane	ND	1.1
Toluene	ND	1.1
Chlorobenzene	ND	1.1
Ethylbenzene	ND	1.1
Xylene (Total)	ND	1.1

ENVIROTECH RESEARCH, INC.

Client ID: PX-5
Site: Ortho Diagnostics

Lab Sample No: 96870
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9461.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 11.8

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. C11H24 Alkane	15.43	51	
2. C11H24 Alkane	15.74	49	
3. Unknown Hydrocarbon	16.19	49	
4. C11H24 Alkane	16.64	78	
5. Unknown	17.00	35	
6. C12H26 Alkane	17.80	40	
7. Unknown Alkane	18.64	44	
8. Unknown	19.08	37	
9. Unknown Alkane	19.90	51	
10. Unknown Alkane	21.00	59	
11. _____	_____	_____	_____
12. _____	_____	_____	_____
13. _____	_____	_____	_____
14. _____	_____	_____	_____
15. _____	_____	_____	_____
16. _____	_____	_____	_____
17. _____	_____	_____	_____
18. _____	_____	_____	_____
19. _____	_____	_____	_____
20. _____	_____	_____	_____
21. _____	_____	_____	_____
22. _____	_____	_____	_____
23. _____	_____	_____	_____
24. _____	_____	_____	_____
25. _____	_____	_____	_____
26. _____	_____	_____	_____
27. _____	_____	_____	_____
28. _____	_____	_____	_____
29. _____	_____	_____	_____
30. _____	_____	_____	_____

TOTAL ESTIMATED CONCENTRATION

493

ENVIROTECH RESEARCH, INC.

Client ID: PX-5
Site: Ortho Diagnostics

Lab Sample No: 96870
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1500.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0
% Moisture: 12

**SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270B**

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
N-Nitrosodimethylamine	ND	370
bis(2-Chloroethyl)ether	ND	370
1,3-Dichlorobenzene	ND	370
1,4-Dichlorobenzene	ND	370
1,2-Dichlorobenzene	ND	370
bis(2-chloroisopropyl)ether	ND	370
N-Nitroso-di-n-propylamine	ND	370
Hexachloroethane	ND	370
Nitrobenzene	ND	370
Isophorone	ND	370
bis(2-Chloroethoxy)methane	ND	370
1,2,4-Trichlorobenzene	ND	370
Naphthalene	ND	19
Hexachlorobutadiene	ND	370
Hexachlorocyclopentadiene	ND	370
2-Chloronaphthalene	ND	370
Dimethylphthalate	ND	370
Acenaphthylene	ND	19
2,6-Dinitrotoluene	ND	370
Acenaphthene	ND	19
2,4-Dinitrotoluene	ND	370
Diethylphthalate	ND	370
4-Chlorophenyl-phenylether	ND	370
Fluorene	ND	19
N-Nitrosodiphenylamine	ND	370
4-Bromophenyl-phenylether	ND	370
Hexachlorobenzene	ND	370
Phenanthrene	ND	19
Anthracene	ND	19
Di-n-butylphthalate	ND	370
Fluoranthene	ND	19
Pyrene	ND	19
Benzidine	ND	750
Butylbenzylphthalate	ND	370

ENVIROTECH RESEARCH, INC.Client ID: PX-5
Site: Ortho DiagnosticsLab Sample No: 96870
Lab Job No: V393Date Sampled: 06/11/97
Date Received: 06/12/97
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1500.dMatrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0
% Moisture: 12**SEMI-VOLATILE ORGANICS - GC/MS**
METHOD 8270B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
3,3'-Dichlorobenzidine	ND	750
Benzo(a)anthracene	ND	19
Chrysene	ND	19
bis(2-Ethylhexyl)phthalate	270 J	370
Di-n-octylphthalate	ND	370
Benzo(b)fluoranthene	ND	19
Benzo(k)fluoranthene	ND	19
Benzo(a)pyrene	ND	19
Indeno(1,2,3-cd)pyrene	ND	19
Dibenz(a,h)anthracene	ND	19
Benzo(g,h,i)perylene	ND	19

ENVIROTECH RESEARCH, INC.

Client ID: PX-5
Site: Ortho Diagnostics

Lab Sample No: 96870
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1500.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0
% Moisture: 11.8

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Decane	12.56	1900	
2. C10H20 Cycloalkane	13.10	500	
3. Unknown Alkane	13.32	550	
4. C11H24 Alkane	13.43	680	
5. Unknown Alkane	13.51	540	
6. Undecane	13.87	2700	
7. Dodecane	15.00	640	
8. Unknown Alkane	15.73	550	
9. Unknown Alkane	16.73	1300	
10. Unknown Alkane	16.95	620	
11. Unknown Alkane	17.48	2300	
12. Unknown	17.80	730	
13. Unknown Alkane	19.01	710	
14. Unknown Alkane	19.46	1400	
15. Unknown	31.21	1200	
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

16320

ENVIROTECH RESEARCH, INC.

Client ID: PX-6
Site: Ortho Diagnostics

Lab Sample No: 96871
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9462.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 11

**VOLATILE ORGANICS - GC/MS
METHOD 8240B**

<u>Parameter</u>		<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Chloromethane		ND	1.1
Bromomethane		ND	1.1
Vinyl Chloride		ND	1.1
Chloroethane		ND	1.1
Methylene Chloride	21	BU	1.1
Acetone	13		5.6
Trichlorofluoromethane		ND	1.1
1,1-Dichloroethene		ND	1.1
1,1-Dichloroethane		ND	1.1
trans-1,2-Dichloroethene		ND	1.1
cis-1,2-Dichloroethene		ND	1.1
Chloroform		ND	1.1
1,2-Dichloroethane		ND	1.1
1,1,1-Trichloroethane		ND	1.1
Carbon Tetrachloride		ND	1.1
Bromodichloromethane		ND	1.1
1,2-Dichloropropane		ND	1.1
cis-1,3-Dichloropropene		ND	1.1
Trichloroethene		ND	1.1
Dibromochloromethane		ND	1.1
1,1,2-Trichloroethane		ND	1.1
Benzene		ND	1.1
trans-1,3-Dichloropropene		ND	1.1
2-Chloroethyl Vinyl Ether		ND	1.1
Bromoform		ND	1.1
Tetrachloroethene		ND	1.1
1,1,2,2-Tetrachloroethane		ND	1.1
Toluene		ND	1.1
Chlorobenzene		ND	1.1
Ethylbenzene		ND	1.1
Xylene (Total)		ND	1.1

ENVIROTECH RESEARCH, INC.

Client ID: PX-6
Site: Ortho Diagnostics

Lab Sample No: 96871
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9462.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 10.8

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Ethane, 1,1,2-trichloro-1,2,2-trifluor	6.09	13	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

13

ENVIROTECH RESEARCH, INC.

Client ID: PX-7
Site: Ortho Diagnostics

Lab Sample No: 96872
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9463.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 10

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Chloromethane	ND	1.1
Bromomethane	ND	1.1
Vinyl Chloride	ND	1.1
Chloroethane	ND	1.1
Methylene Chloride	24 BQ	1.1
Acetone	13	5.6
Trichlorofluoromethane	ND	1.1
1,1-Dichloroethene	ND	1.1
1,1-Dichloroethane	ND	1.1
trans-1,2-Dichloroethene	ND	1.1
cis-1,2-Dichloroethene	0.7J	1.1
Chloroform	1.2	1.1
1,2-Dichloroethane	ND	1.1
1,1,1-Trichloroethane	ND	1.1
Carbon Tetrachloride	ND	1.1
Bromodichloromethane	ND	1.1
1,2-Dichloropropane	ND	1.1
cis-1,3-Dichloropropene	ND	1.1
Trichloroethene	ND	1.1
Dibromochloromethane	ND	1.1
1,1,2-Trichloroethane	ND	1.1
Benzene	25	1.1
trans-1,3-Dichloropropene	ND	1.1
2-Chloroethyl Vinyl Ether	ND	1.1
Bromoform	ND	1.1
Tetrachloroethene	ND	1.1
1,1,2,2-Tetrachloroethane	ND	1.1
Toluene	ND	1.1
Chlorobenzene	ND	1.1
Ethylbenzene	ND	1.1
Xylene (Total)	ND	1.1

ENVIROTECH RESEARCH, INC.

Client ID: PX-7
Site: Ortho Diagnostics

Lab Sample No: 96872
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9463.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 10.5

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Ether	5.70	6.2	
2. Ethane, 1,1,2-trichloro-1,2,2-trifluor	6.07	11	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

17

ENVIROTECH RESEARCH, INC.

Client ID: PX-8
Site: Ortho Diagnostics

Lab Sample No: 96873
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9464.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 12

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>		<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Chloromethane		ND	1.1
Bromomethane		ND	1.1
Vinyl Chloride		ND	1.1
Chloroethane		ND	1.1
Methylene Chloride	52	BQ	1.1
Acetone	14		5.6
Trichlorofluoromethane		ND	1.1
1,1-Dichloroethene		ND	1.1
1,1-Dichloroethane		ND	1.1
trans-1,2-Dichloroethene		ND	1.1
cis-1,2-Dichloroethene		1.2	1.1
Chloroform		2.8	1.1
1,2-Dichloroethane		ND	1.1
1,1,1-Trichloroethane		ND	1.1
Carbon Tetrachloride		ND	1.1
Bromodichloromethane		ND	1.1
1,2-Dichloropropane		ND	1.1
cis-1,3-Dichloropropene		ND	1.1
Trichloroethene		ND	1.1
Dibromochloromethane		ND	1.1
1,1,2-Trichloroethane		ND	1.1
Benzene	56		1.1
trans-1,3-Dichloropropene		ND	1.1
2-Chloroethyl Vinyl Ether		ND	1.1
Bromoform		ND	1.1
Tetrachloroethene		ND	1.1
1,1,2,2-Tetrachloroethane		ND	1.1
Toluene		ND	1.1
Chlorobenzene		ND	1.1
Ethylbenzene		ND	1.1
Xylene (Total)		0.8J	1.1

ENVIROTECH RESEARCH, INC.

Client ID: PX-8
Site: Ortho Diagnostics

Lab Sample No: 96873
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9464.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 11.5

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Ether	5.70	13	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

13

ENVIROTECH RESEARCH, INC.

Site: Ortho Diagnostics

Lab Job No: V393

Date Sampled: 6/11/97

Date Extracted: 6/13/97

Date Received: 6/12/97

Date Analyzed: 6/13/97

Matrix: SOIL

QA Batch: 3859

TOTAL PETROLEUM HYDROCARBONS (418.1)

<u>Envirotech Sample #</u>	<u>Client ID</u>	<u>% Moisture</u>	<u>Dilution Factor</u>	<u>Analytical Result mg/kg (Dry Wt.)</u>
96866	PX-1	10.4	5.0	2020
96867	PX-2	11.0	1.0	396
96868	PX-3	10.3	1.0	ND
96869	PX-4	14.9	1.0	121
96870	PX-5	11.8	1.0	653
96871	PX-6	10.8	1.0	ND
96872	PX-7	10.5	1.0	ND
96873	PX-8	11.5	1.0	ND

Quantitation Limit for Total Petroleum Hydrocarbons (418.1) is 25.0 mg/kg for an undiluted sample.

ENVIROTECH RESEARCH INC.

777 New Durham Road
Edison, New Jersey 08817
Phone: (908) 549-3900 Fax: (908) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

PAGE OF

Name (for report and invoice) MARC CICALESE		Samplers Name (Printed) Paul Cicalese		Site/Project Identification Ortho Diagnostic Systems Inc	
Company McLAREN / HART		P.O. #		State (Location of site): NJ: <input type="checkbox"/> NY: <input type="checkbox"/> Other: <input type="checkbox"/>	
Address 25 INDEPENDENCE BLVD.		Analysis Turnaround Time Standard <input checked="" type="checkbox"/> BN+15 Rush Charges Authorized For: 2 Week <input type="checkbox"/> 1 Week <input type="checkbox"/> 24 HR <input checked="" type="checkbox"/> BN+15 Other <input checked="" type="checkbox"/> 24 HR TPH		ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUESTED) BN+15 TPH BN+15	
City WARREN State NJ Zip 07059				LAB USE ONLY Project No. V393	
Phone 647-8111 Fax 908 6478162				Job No. 9086478162	
Sample Identification	Date	Time	Matrix	No. of Cont.	Sample Numbers
PX-1	6-11-97	1830	SOIL	2	9086478162
PX-2	6-11-97	1840	SOIL	2	9086478163
PX-3	6-11-97	1845	SOIL	2	9086478164
PX-4	6-11-97	1850	SOIL	2	9086478165
PX-5	6-11-97	1855	SOIL	2	9086478166
PX-6	6-11-97	1905	SOIL	2	9086478167
PX-7	6-11-97	1910	SOIL	2	9086478168
PX-8	6-11-97	1915	SOIL	2	9086478169
24 HR TAT Verbal for PPVC+IC + TPH / See special instructions <i>for 24 hr TAT for BN+15</i>					
Preservation Used: 1 = ICE, 2 = HCl, 3 = H ₂ SO ₄ , 4 = HNO ₃ , 5 = NaOH			Soil:	1	Tuesday, 6/17/97 9:50 AM
6 = Other _____, 7 = Other _____			Water:		6-12-97

Special Instructions Analyze 25% of highest TPH Detections for BN+15 - Confirm with P.M.!		Water Metals Filtered (Yes/No)? <input type="checkbox"/>	
Relinquished by 1) Deborah Schaeff	Company McLaren / Hart	Date / Time 6/12/97 13:00	Received by Paul Cicalese
Relinquished by 2) Ann Z	Company Envirotech	Date / Time 6/12/97 3:15	Received by Diane Shamy
Relinquished by 3)	Company	Date / Time 1	Received by 3)
Relinquished by 4)	Company	Date / Time 1	Received by 4)

Laboratory Certifications: New Jersey (12543), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
ENVIROTECH RESEARCH, INC.
777 NEW DURHAM ROAD, EDISON, NJ 08817
(908) 549-3900**

Client: McLaren Hart

Date Sampled: 6/11/97

Site: Ortho Diagnostics

Date Received: 6/12/97

Matrix: SOLID

Job No.: V393

Sample No.: 96866

Analytic Parameter	Extraction Date	Extractor's Name	Analysis Date	Analyst's Name	QA Batch
PPVOA+10			6-13-97	DRL	4420
PET HYDROCARBONS	6.13.97	GC	6.13.97	PJ	3859
PPBN+15					

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
ENVIROTECH RESEARCH, INC.
777 NEW DURHAM ROAD, EDISON, NJ 08817
(908) 549-3900**

Client: McLaren Hart

Date Sampled: 6/11/97

Site: Ortho Diagnostics

Date Received: 6/12/97

Matrix: SOLID

Job No.: V393

Sample No.: 96867

Analytic Parameter	Extraction Date	Extractor's Name	Analysis Date	Analyst's Name	QA Batch
PPVOA+10			6-12-97	B2L	4420
PET HYDROCARBONS	6.13.97	Gc	6.13.97	PJ	3855
PPBN+15					

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
ENVIROTECH RESEARCH, INC.
777 NEW DURHAM ROAD, EDISON, NJ 08817
(908) 549-3900**

Client: McLaren Hart

Date Sampled: 6/11/97

Site: Ortho Diagnostics

Date Received: 6/12/97

Matrix: SOLID

Job No.: V393

Sample No.: 96868

Analytic Parameter	Extraction Date	Extractor's Name	Analysis Date	Analyst's Name	QA Batch
PPVOA+10			6-13-97	CN	4K18
PET HYDROCARBONS	6-13-97	GC	6-13-97	PS	3819
PPBN+15	6-16-97	OF			34114

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
ENVIROTECH RESEARCH, INC.
777 NEW DURHAM ROAD, EDISON, NJ 08817
(908) 549-3900**

Client: McLaren Hart

Date Sampled: 6/11/97

Site: Ortho Diagnostics

Date Received: 6/12/97

Matrix: SOLID

Job No.: V393

Sample No.: 96869

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
ENVIROTECH RESEARCH, INC.
777 NEW DURHAM ROAD, EDISON, NJ 08817
(908) 549-3900**

Client: McLaren Hart

Date Sampled: 6/11/97

Site: Ortho Diagnostics

Date Received: 6/12/97

Matrix: SOLID

Job No.: V393

Sample No.: 96870

Analytic Parameter	Extraction Date	Extractor's Name	Analysis Date	Analyst's Name	QA Batch
PPVOA+10			6-13-97	CN	4448
PET HYDROCARBONS	6-13-97	GC	6-13-97	PS	3859
PPBN+15	6-16-97	OJ			3444

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
ENVIROTECH RESEARCH, INC.
777 NEW DURHAM ROAD, EDISON, NJ 08817
(908) 549-3900**

Client: McLaren Hart

Date Sampled: 6/11/97

Site: Ortho Diagnostics

Date Received: 6/12/97

Matrix: SOLID

Job No.: V393

Sample No.: 96871

Analytic Parameter	Extraction Date	Extractor's Name	Analysis Date	Analyst's Name	QA Batch
PPVOA+10			6-12-97	CJ	4448
PET HYDROCARBONS	6-13-97	GC	6-13-97	PD	1819
PPBN+15					

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
ENVIROTECH RESEARCH, INC.
777 NEW DURHAM ROAD, EDISON, NJ 08817
(908) 549-3900**

Client: McLaren Hart

Date Sampled: 6/11/97

Site: Ortho Diagnostics

Date Received: 6/12/97

Matrix: SOLID

Job No.: V393

Sample No.: 96872

Analytic Parameter	Extraction Date	Extractor's Name	Analysis Date	Analyst's Name	QA Batch
PPVOA+10			6-13-97	CN	4418
PET HYDROCARBONS	6-13-97	GC	6-13-97	PJ	3855
PPBN+15					

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
ENVIROTECH RESEARCH, INC.
777 NEW DURHAM ROAD, EDISON, NJ 08817
(908) 549-3900**

Client: McLaren Hart

Date Sampled: 6/11/97

Site: Ortho Diagnostics

Date Received: 6/12/97

Matrix: SOLID

Job No.: V393

Sample No.: 96873

Analytic Parameter	Extraction Date	Extractor's Name	Analysis Date	Analyst's Name	QA Batch
PPVOA+10			6-13-97	CN	4448
PET HYDROCARBONS	6-13-97	G-	6-13-97	PJ	3859
PPBN+15					

Analytical Methodology Summary

Volatile Organics:

Water samples are analyzed for volatile organics by purge and trap GC/MS as specified in EPA Method 624. Drinking water samples are analyzed by EPA Methods 502.2 and 524.2. Solid samples are analyzed for priority pollutant volatile organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8240B. Water samples are analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) by GC-PID as specified in EPA Methods 502.2 and 602. Solid samples are analyzed for BTEX as specified in EPA Method 8020A.

Acid and Base/Neutral Extractable Organics:

Water samples are analyzed for acid and/or base/neutral extractable organics by GC/MS in accordance with EPA Method 625. Solids are analyzed for acid and/or base/neutral extractable priority pollutants as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8270B.

GC/MS Nontarget Compound Analysis:

Analysis for nontarget compounds is conducted, upon request, in conjunction with GC/MS analyses by EPA Methods 624, 625, 8240B and 8270B. Nontarget compound analysis is conducted using a forward library search of the EPA/NIH/NBS mass spectral library of compounds at the greatest apparent concentration (10% or greater of the nearest internal standard) in each organic fraction (15 for volatile, 15 for base/ neutrals and 10 for acid extractables).

Organochlorine Pesticides and PCBs:

Water samples are analyzed for organochlorine pesticides and PCBs by dual column gas chromatography with electron capture detectors as specified in EPA Method 608. Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8080A.

Total Petroleum Hydrocarbons:

Water samples are analyzed for petroleum hydrocarbons by I.R. using EPA Method 418.1. Solid samples are prepared for analysis by soxhlet extraction consistent with the March 1990 N.J. DEP "Remedial Investigation Guide" Appendix A, page 52, and analyzed by U.S. EPA Method 418.1

Metals Analysis:

Metals analyses are performed by any of four techniques specified by a Method Code provided on each data report page, as follows:

P - Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP)

A - Flame Atomic Absorption

F - Furnace Atomic Absorption

CV - Manual Cold Vapor (Mercury)

Water samples are digested and analyzed using EPA methods provided in "Methods for Chemical Analysis of Water and Wastewater" (EPA 600/4-79-020). Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition); samples are digested according to Method 3050 "Acid Digestion of Soil, Sediments and Sludges."

Specific method references for ICP analyses are water Method 200.7 and solid Method 6010. Mercury analyses are conducted by the manual cold vapor technique specified by water Method 245.1 and solid Method 7471. Other specific Atomic Absorption method references are as follows:

Element	Water Test Method		Solid Test Method	
	Flame	Furnace	Flame	Furnace
Aluminum	202.1	202.2	7020	--
Antimony	204.1	204.2	7040	7041
Arsenic	--	206.2	--	7060
Barium	208.1	--	7080	--
Beryllium	210.1	210.2	7090	7091
Cadmium	213.1	213.2	7130	7131
Calcium	215.1	--	7140	--
Chromium, Total	218.1	218.2	7190	7191
Chromium, (+6)	218.4	218.5	7197	7195
Cobalt	219.1	219.2	7200	7201
Copper	220.1	220.2	7210	--
Iron	236.1	236.2	7380	--
Lead	239.1	239.2	7420	7421
Magnesium	242.1	--	7450	--
Manganese	243.1	243.2	7460	--
Nickel	249.1	249.2	7520	--
Potassium	258.1	--	7610	--
Selenium	--	270.2	--	7740
Silver	272.1	272.2	7760	--
Sodium	273.1	--	7770	--
Tin	283.1	283.2	7870	--
Thallium	279.1	279.2	7840	7841
Vanadium	286.1	286.2	7910	7911
Zinc	289.1	289.2	7950	--

Cyanide:

Water samples are analyzed for cyanide using EPA Method 335.2. Cyanide is determined in solid samples as specified in the EPA Contract Laboratory Program IFB dated July 1988, revised February 1989.

Phenols:

Water samples are analyzed for total phenols using EPA Method 420.1. Total phenols are determined in solid samples by preparing the sample as outlined in the EPA Contract Laboratory Program IFB for cyanide, followed by a phenols determination using EPA Method 420.1.

Cleanup of Semivolatile Extracts:

Upon request Method 3611 Alumina Column Cleanup, and/or Method 3650 Acid-Base Partition Cleanup are performed to improve detection limits by the removal of saturated hydrocarbon interferences.

Hazardous Waste Characteristics:

Samples for hazardous waste characteristics are analyzed as specified in the U.S. EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition). Specific method references are as follows:

Ignitability - Method 1020

Corrosivity - Water pH Method 9040
Soil pH Method 9045

Reactivity - Chapter 7, Section 7.3.3 and 7.3.4
respectively for hydrogen cyanide and
hydrogen sulfide release

Toxicity - TCLP Method 1311

Miscellaneous Parameters:

Additional analyses performed on both aqueous and solid samples are in accordance with methods published in the following references:

- Test Methods for Evaluating Solid Wastes, SW-846 3rd Edition, November 1986.
- Standard Methods for the Examination of Water and Wastewater, 17th Edition.
- Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 1979.

DATA REPORTING QUALIFIERS

- ND - The compound was not detected at the indicated concentration.
- J - Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified detection limit but greater than zero. The concentration given is an approximate value.
- B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

NON-CONFORMANCE SUMMARY

Envirotech Research, Inc. Job Number: V393

Volatile Organics Analysis:

All data conforms with method requirements ✓; or
Analysis was not requested ____; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ()

Base/Neutral and/or Acid Extractable Organics:

All data conforms with method requirements ✓; or
Analysis was not requested ____; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ()

PCBs and/or Organochlorine Pesticides:

All data conforms with method requirements ____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ()

Page 1 of 2

Non-conformance Summary, Page 2 of 2
Envirotech Research, Inc. Job Number: V393

Metals Analysis:

All data conforms with method requirements _____; or
Analysis was not requested ✓; or

Non-conformance for the specific samples listed is as follows:

See continuation page if checked ()

Total Petroleum Hydrocarbons:

All data conforms with method requirements ✓; or
Analysis was not requested _____; or

Non-conformance for the specific samples listed is as follows:

See continuation page if checked ()

General Chemistry/Disposal Parameters:

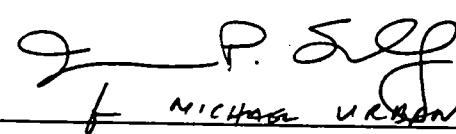
All data conforms with method requirements _____; or
Analysis was not requested ✓; or

Non-conformance for the specific samples listed is as follows:

See continuation page if checked ()

Signature of

Laboratory Manager:


M. V. Larson

Date: 6/25/97

Client ID: PX-1
Site: Ortho Diagnostics

Lab Sample No: 96866
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c3061.d

Matrix: SOIL
Level: HIGH
Sample Weight: 4.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 10

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
Chloromethane	ND	140
Bromomethane	ND	140
Vinyl Chloride	ND	140
Chloroethane	ND	140
Methylene Chloride	400 B	140
Acetone	ND	700
Trichlorofluoromethane	ND	140
1,1-Dichloroethene	ND	140
1,1-Dichloroethane	ND	140
trans-1,2-Dichloroethene	ND	140
cis-1,2-Dichloroethene	ND	140
Chloroform	ND	140
1,2-Dichloroethane	ND	140
1,1,1-Trichloroethane	ND	140
Carbon Tetrachloride	ND	140
Bromodichloromethane	ND	140
1,2-Dichloropropane	ND	140
cis-1,3-Dichloropropene	ND	140
Trichloroethene	ND	140
Dibromochloromethane	ND	140
1,1,2-Trichloroethane	ND	140
Benzene	280	140
trans-1,3-Dichloropropene	ND	140
2-Chloroethyl Vinyl Ether	ND	140
Bromoform	ND	140
Tetrachloroethene	ND	140
1,1,2,2-Tetrachloroethane	ND	140
Toluene	ND	140
Chlorobenzene	ND	140
Ethylbenzene	ND	140
Xylene (Total)	ND	140

Client ID: PX-1
Site: Ortho Diagnostics

Lab Sample No: 96866
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c3061.d

Matrix: SOIL
Level: HIGH
Sample Weight: 4.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 10.4

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. C10H22 Alkane	14.95	780	
2. C11H24 Alkane	15.76	2400	
3. Trimethylbenzene isomer	15.93	1400	
4. C10H20 Cycloalkane	16.19	3700	
5. Unknown Alkane	16.35	880	
6. C11H24 Alkane	16.68	4000	
7. Decahydronaphthalene isomer	16.83	2300	
8. Ethyldimethylbenzene isomer	17.02	2000	
9. Decahydromethylnaphthalene isomer	17.52	2100	
10. C12H26 Alkane	17.84	1300	
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			
TOTAL ESTIMATED CONCENTRATION		20860	

Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3061.d
Report Date: 13-Jun-97 16:21:14

Envirotech Research Inc.

VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3061.d
Lab Smp Id: 96866 Client Smp ID: PX-1
Inj Date : 13-JUN-97 11:56:00
Operator : VOAMS 3 Inst ID: VOAMS3.i
Smp Info : 96866;50;10.4;4;10
Misc Info : V393;4420;DRL
Comment :
Method : /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/8240b-HIGH.m
Meth Date : 13-Jun-97 09:08:33 Quant Type: ISTD
Cal Date : 24-MAY-97 13:16:00 Cal File: c2694.d
Als bottle: 4
Dil Factor: 50.00000
Integrator: HP RTE
Target Version: 3.20 Compound Sublist: PPVOA+ACETv.sub
Procesing Host: hp735

Concentration Formula: (Vt/Ws)/((100-M)/100)

Name	Value	Description
Vt	10.000	Volume of final extract (mL)
Ws	4.000	Weight of sample extracted (g)
M	10.400	% Moisture (not decanted)

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/L)	FINAL (ug/Kg)
6 Methylene Chloride	84	6.754	6.726 (0.755)	85816	2.9	400		
* 2 Bromochloromethane	128	8.945	8.917 (1.000)	1002523	50			
\$ 16 1,2-Dichloroethane-d4 (SUR)	65	9.694	9.666 (0.948)	1235947	41	5700		
28 Benzene	78	9.810	9.782 (0.959)	170487	2.0	280		
* 19 1,4-Difluorobenzene	114	10.227	10.200 (1.000)	4237821	50			
\$ 37 Toluene-d8 (SUR)	98	12.101	12.059 (1.183)	3645344	44	6100		
* 32 Chlorobenzene-d5	117	13.831	13.788 (1.000)	3112227	50			
\$ 41 Bromofluorobenzene (SUR)	174	15.128	15.085 (1.094)	1469851	46	6400		

Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3061.d

Date : 13-JUN-97 11:56:00

Client ID: PX-1

Sample Info: 96866;50;10.4;4;10

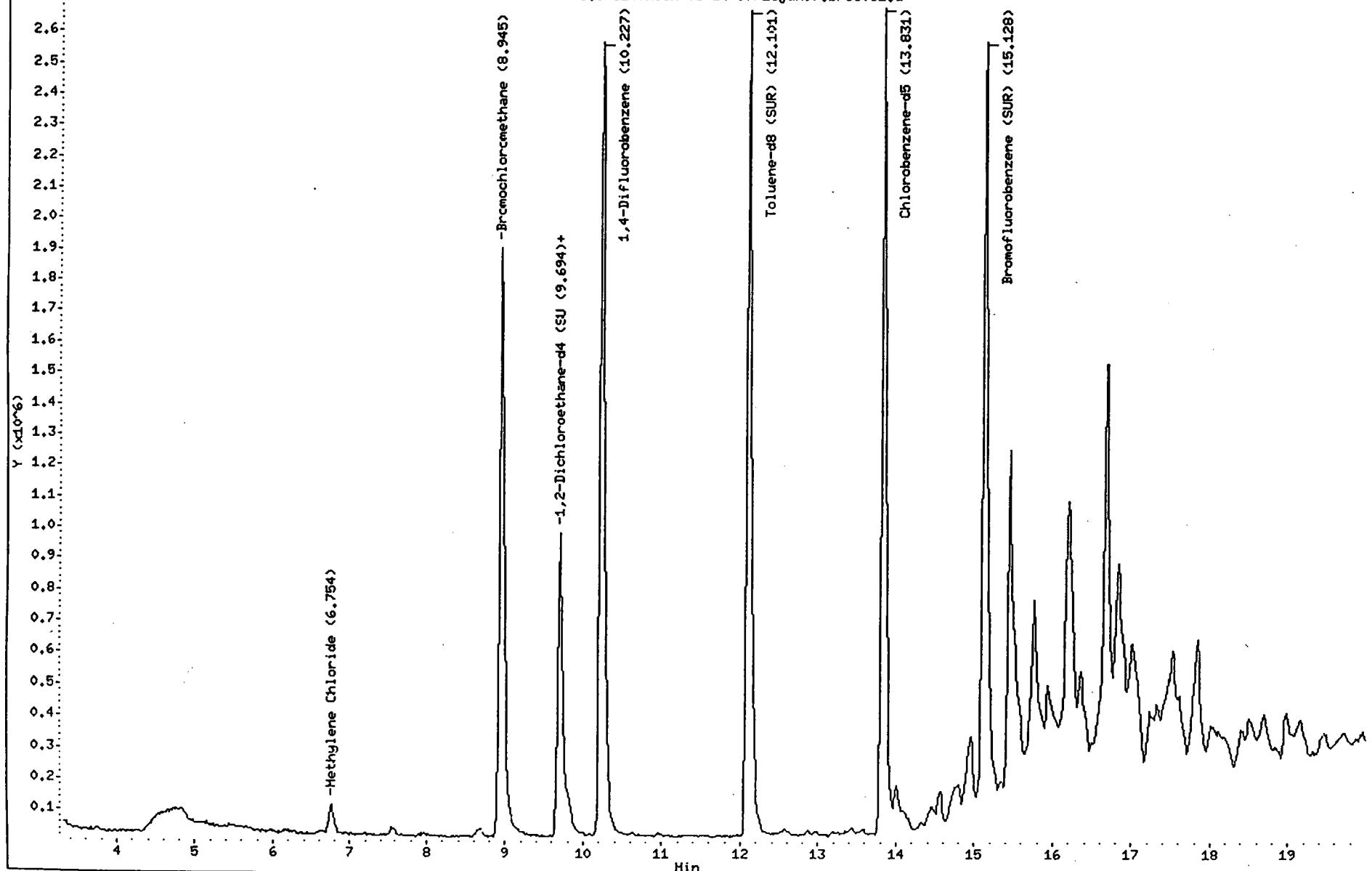
Column phase: DB624

Instrument: VOAMS3.i

Operator: VOAMS 3

Column diameter: 0.53

/chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3061.d



Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13jun97.b/c3061.d

Date : 13-JUN-97 11:56:00

Client ID: PX-1

Instrument: VOAMS3.i

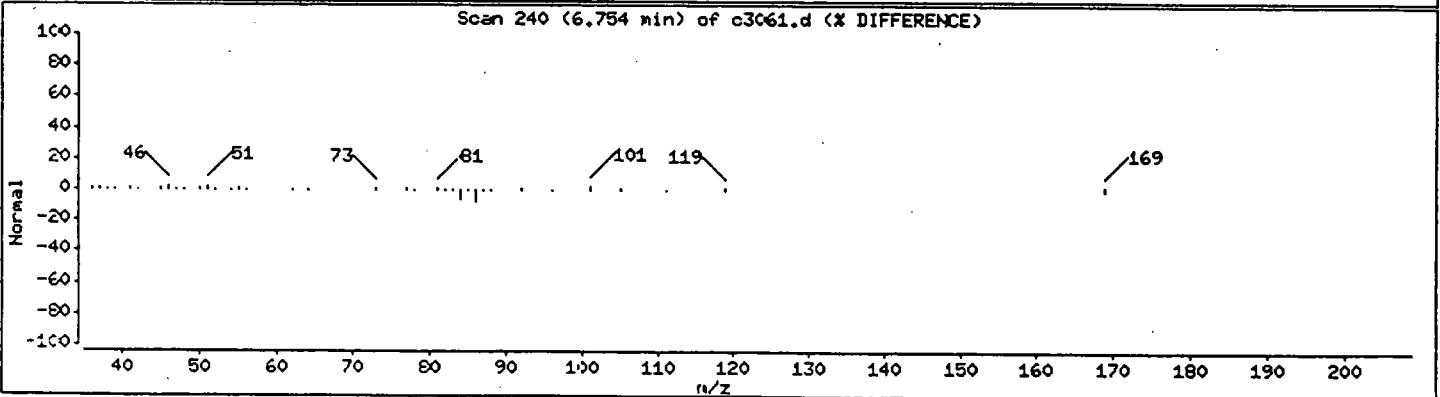
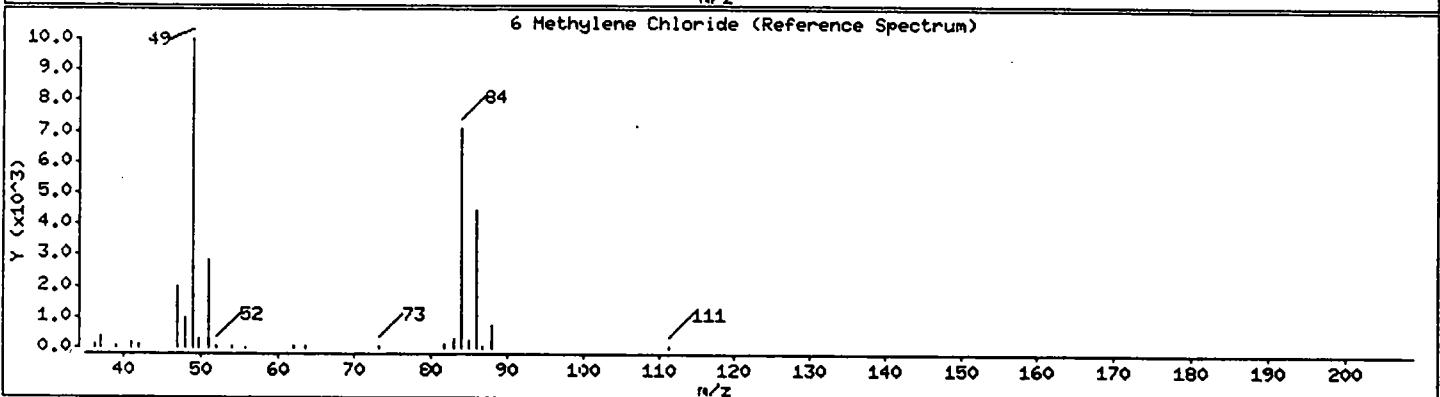
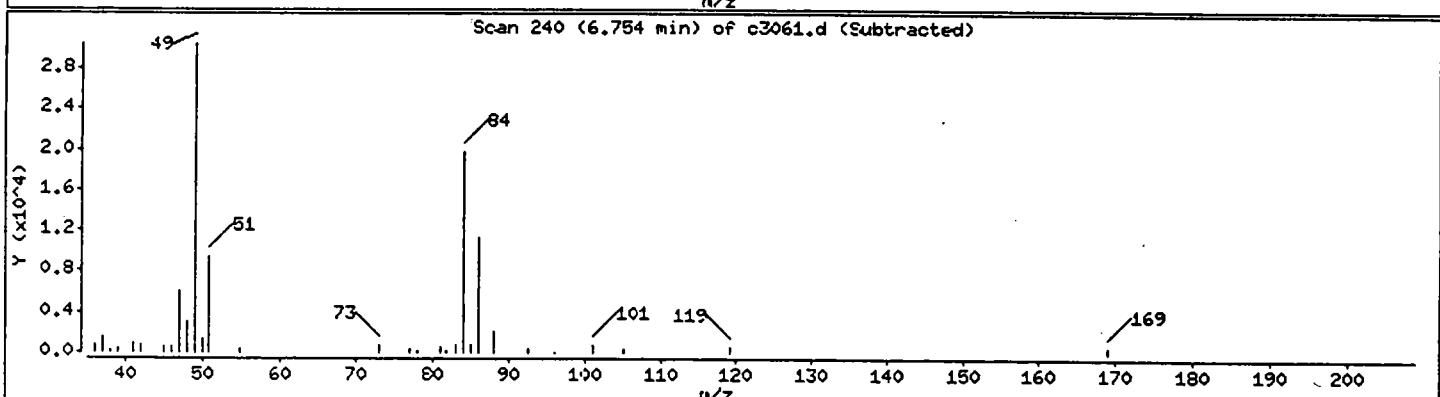
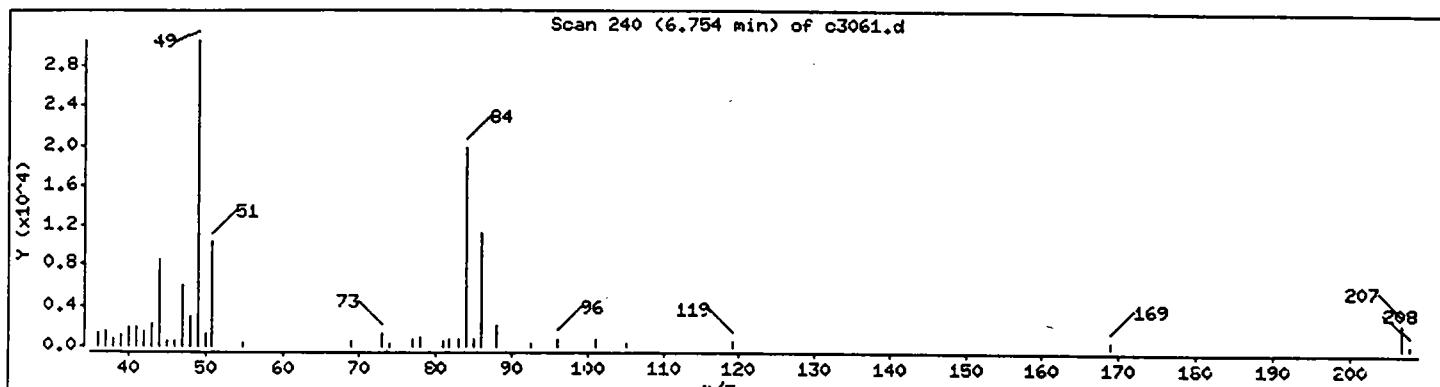
Sample Info: 96866:50:10.4;4:10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

6 Methylene Chloride



Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13jun97.b/c3061.d

Date : 13-JUN-97 11:56:00

Client ID: PX-1

Instrument: VOAMS3.i

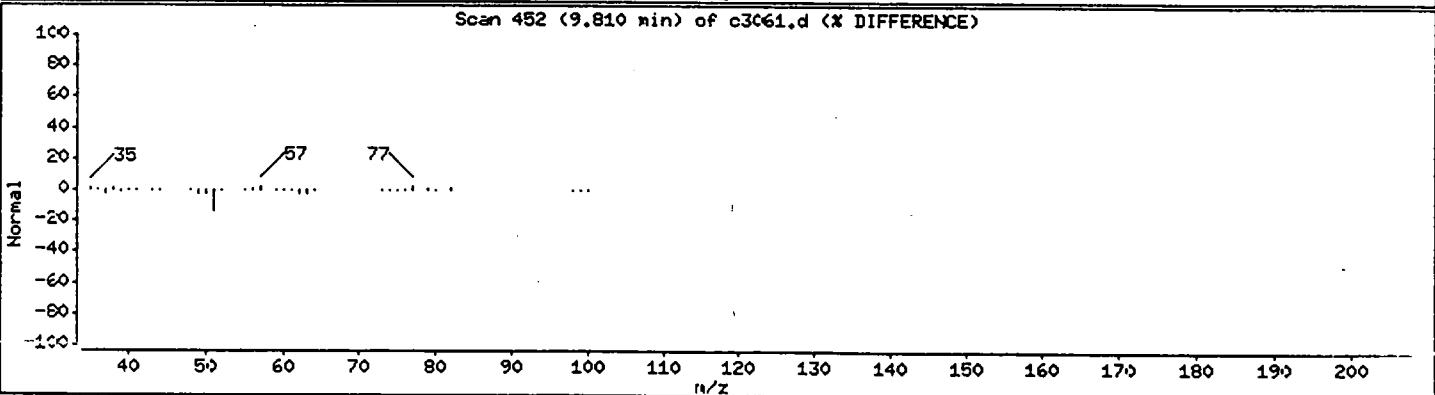
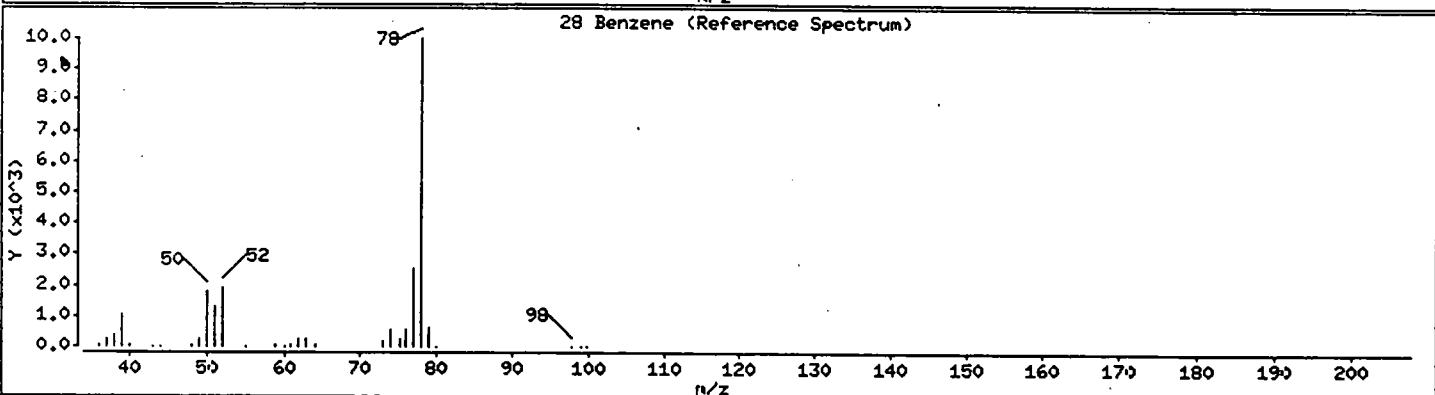
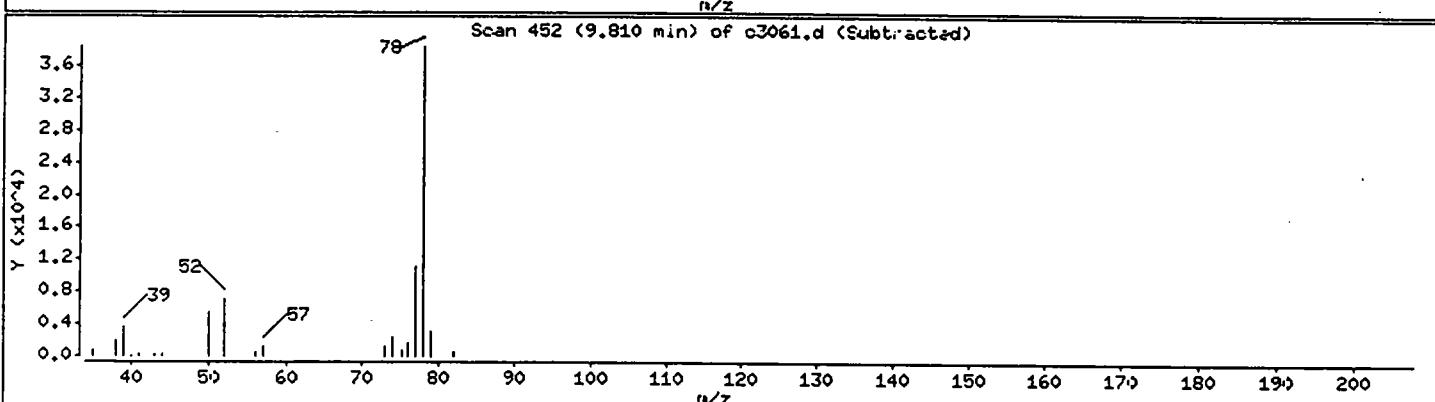
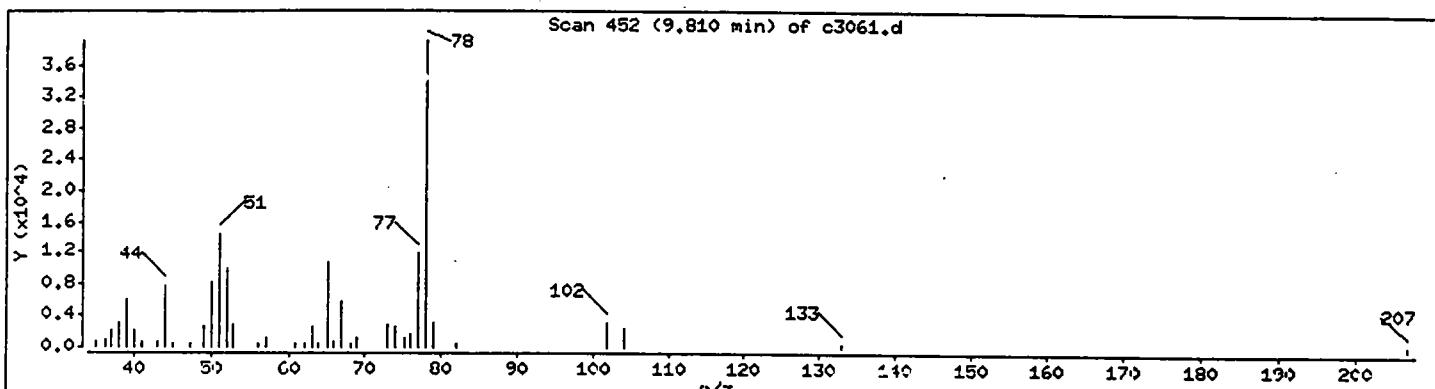
Sample Info: 96866:50:10.4;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

28 Benzene



Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13jun97.b/c3061.d

Date : 13-JUN-97 11:56:00

Client ID: PX-1

Instrument: VOAMS3.i

Sample Info: 96866;50:10.4:4:10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

C10H22 Alkane

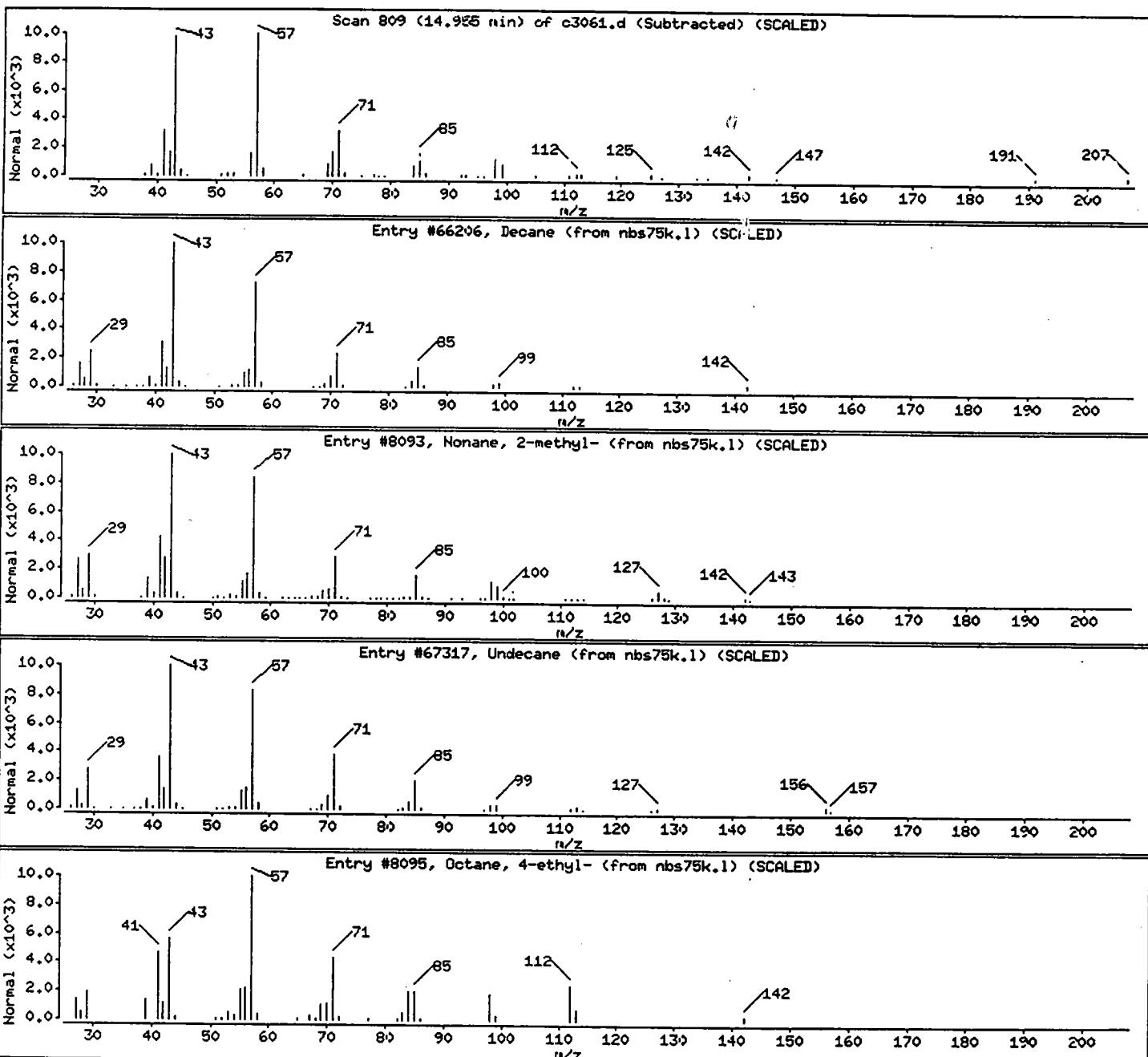
Decane

	CAS Number	Library	Entry	Quality	Formula	Weight
Decane	124-18-5	nbs75k.1	66206	87	C10H22	142
Nonane, 2-methyl-	871-83-0	nbs75k.1	8093	81	C10H22	142
Undecane	1120-21-4	nbs75k.1	67317	78	C11H24	156
Octane, 4-ethyl-	15869-86-0	nbs75k.1	8095	76	C10H22	142

Nonane, 2-methyl-

Undecane

Octane, 4-ethyl-



Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13jun97.b/c3061.d

Date : 13-JUN-97 11:56:00

Client ID: PX-1

Instrument: VOAMS3.i

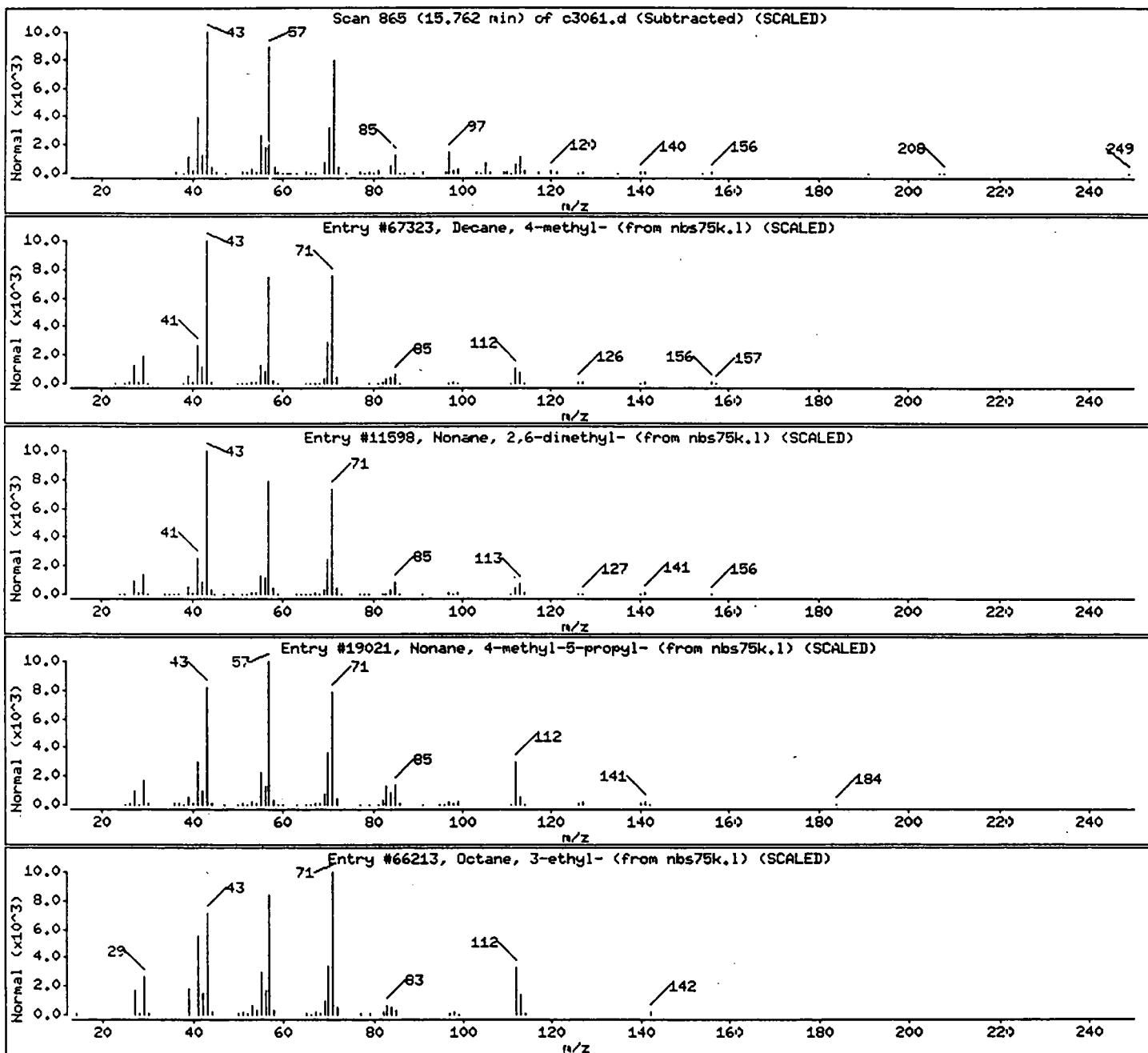
Sample Info: 96866:50;10.4;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
C11H24 Alkane						
Decane, 4-methyl-	2847-72-5	nbs75k.1	67323	90	C11H24	156
Nonane, 2,6-dimethyl-	17302-28-2	nbs75k.1	11598	86	C11H24	156
Nonane, 4-methyl-5-propyl-	62185-55-1	nbs75k.1	19021	72	C13H28	184
Octane, 3-ethyl-	5881-17-4	nbs75k.1	66213	72	C10H22	142



Data File: /chem/VOAMS3.i/924CHIGH/06-24-97/13jun97.b/c3061.d

Date : 13-JUN-97 11:56:00

Client ID: PX-1

Instrument: VOAMS3.i

Sample Info: 96866;50;10.4;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

Trimethylbenzene isomer

1,2,4-Trimethylbenzene

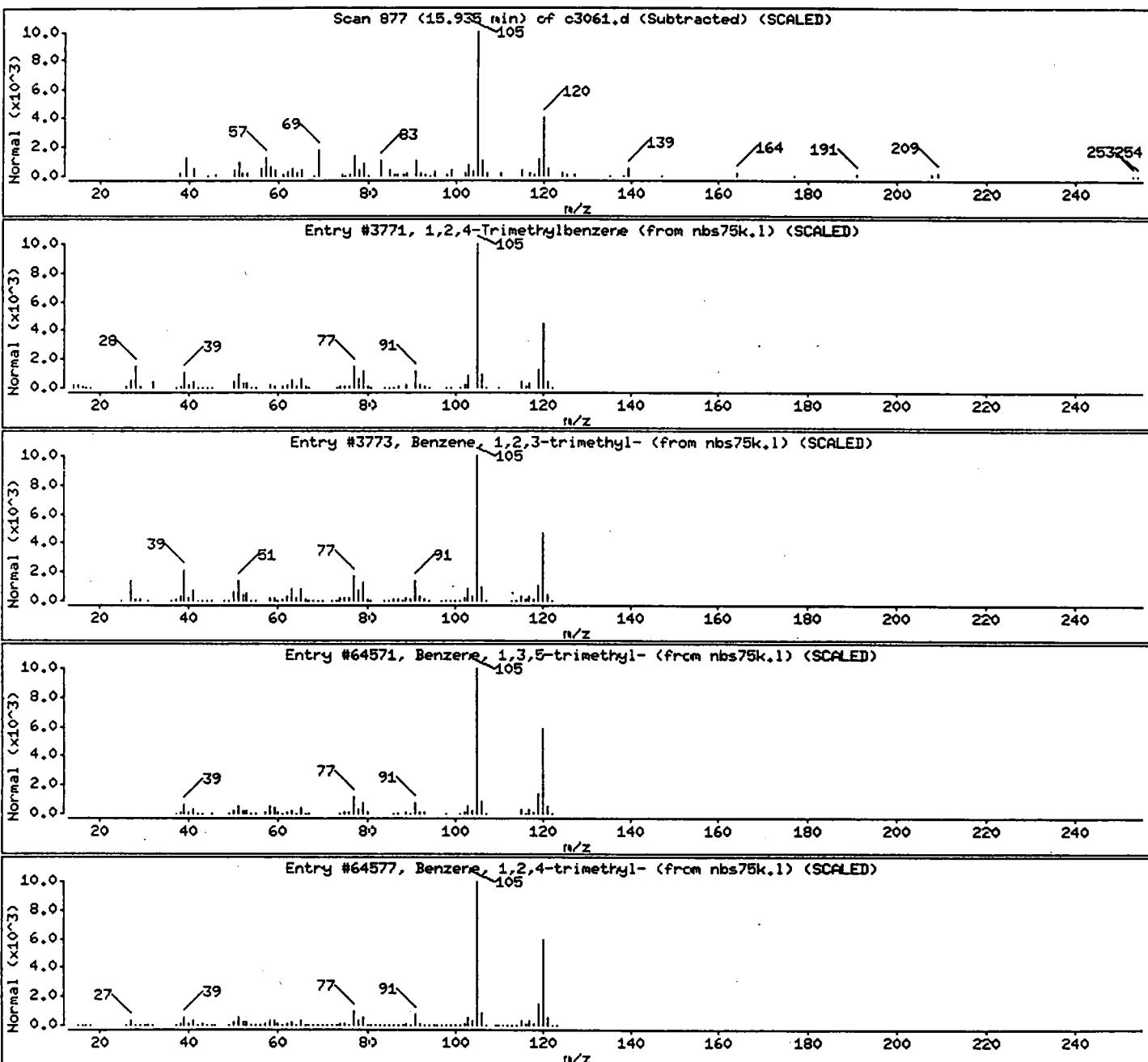
CAS Number Library Entry Quality Formula Weight

95-36-3	nbs75k.1	3771	96	C9H12	120
526-73-8	nbs75k.1	3773	95	C9H12	120
108-67-8	nbs75k.1	64571	94	C9H12	120
95-63-6	nbs75k.1	64577	93	C9H12	120

Benzene, 1,2,3-trimethyl-

Benzene, 1,3,5-trimethyl-

Benzene, 1,2,4-trimethyl-



Data File: /chem/VOAMS3.i/824CHICH/05-24-97/13jun97.b/c3061.d

Date : 13-JUN-97 11:56:00

Client ID: PX-1

Instrument: VOAMS3.i

Sample Info: %6866;50;10.4;4;10

Operator: VOAMS 3

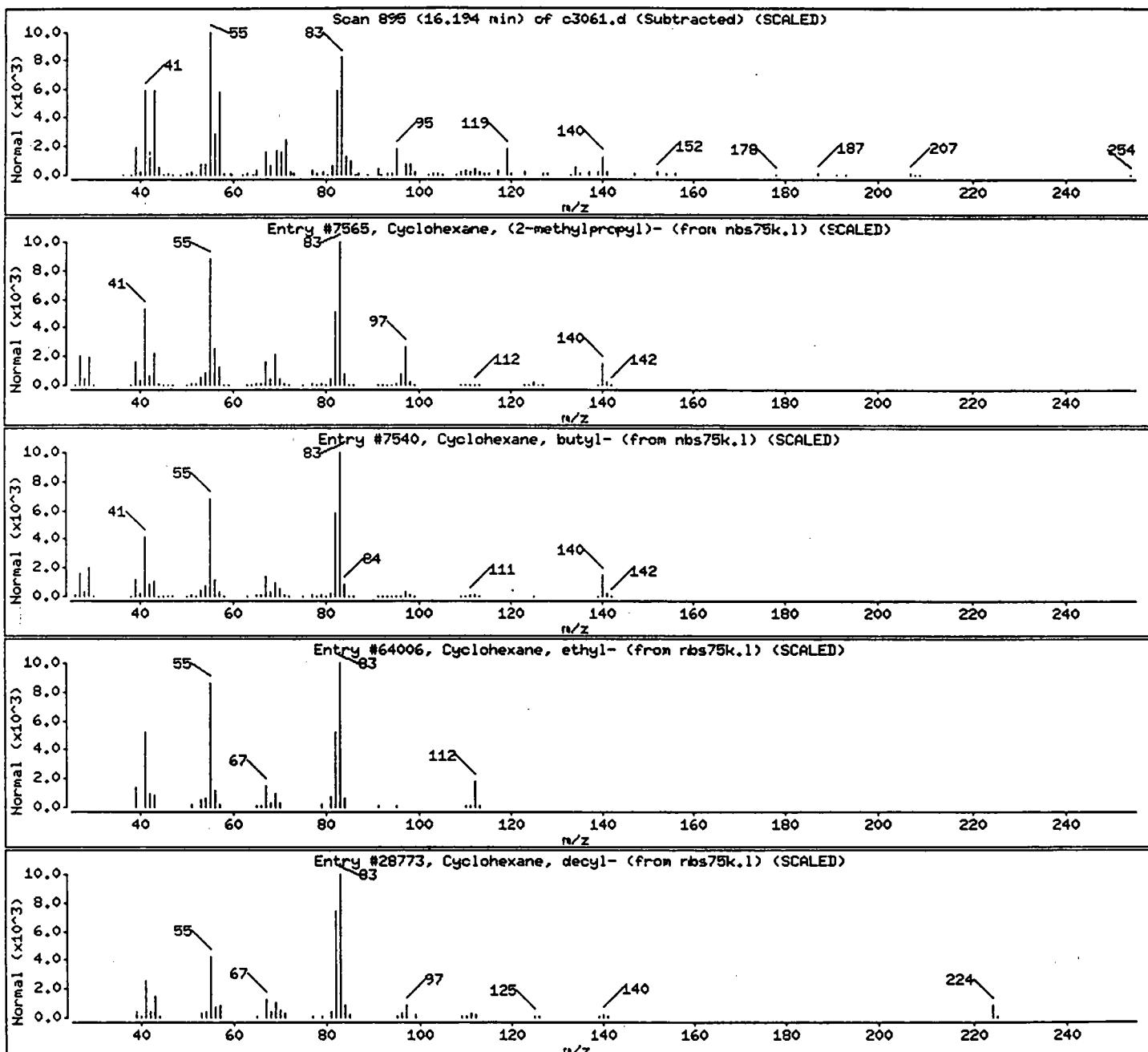
Column phase: DB624

Column diameter: 0.53

Library Search Compound Hatch

C10H20 Cycloalkane

	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclohexane, (2-methylpropyl)-	1678-98-4	nbs75k.1	7565	76	C10H20	140
Cyclohexane, butyl-	1678-93-9	nbs75k.1	7540	58	C10H20	140
Cyclohexane, ethyl-	1678-91-7	nbs75k.1	64006	52	C8H16	112
Cyclohexane, decyl-	1795-16-0	nbs75k.1	28773	50	C16H32	224



Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13jun97.b/c3061.d

Date : 13-JUN-97 11:56:00

Client ID: PX-1

Instrument: VOAMS3.i

Sample Info: 96866;50;10.4;4;10

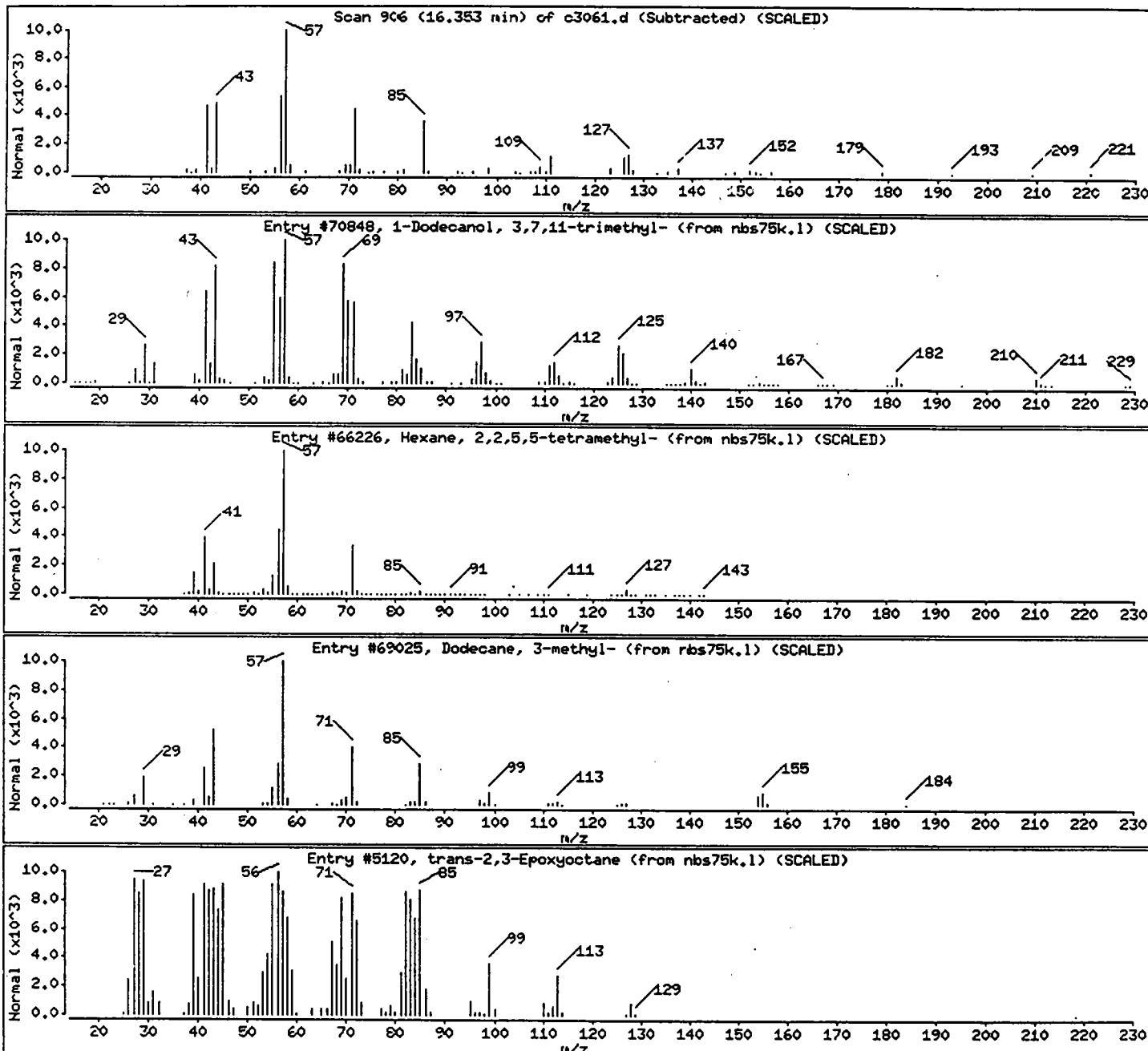
Operator: VOAMS 3

Column phase: DB624

Column diameter: .0.53

Library Search Compound Match

	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Alkane						
1-Dodecanol, 3,7,11-trimethyl-	6750-34-1	nbs75k.1	70848	53	C15H32O	228
Hexane, 2,2,5,5-tetramethyl-	1071-81-4	nbs75k.1	66226	50	C10H22	142
Dodecane, 3-methyl-	17312-57-1	nbs75k.1	69025	50	C13H28	184
trans-2,3-Epoxyoctane	28180-70-3	nbs75k.1	5120	47	C8H16O	128



Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13jum97.b/c3061.d

Date : 13-JUN-97 11:56:00

Client ID: PX-1

Instrument: VOAMS3.i

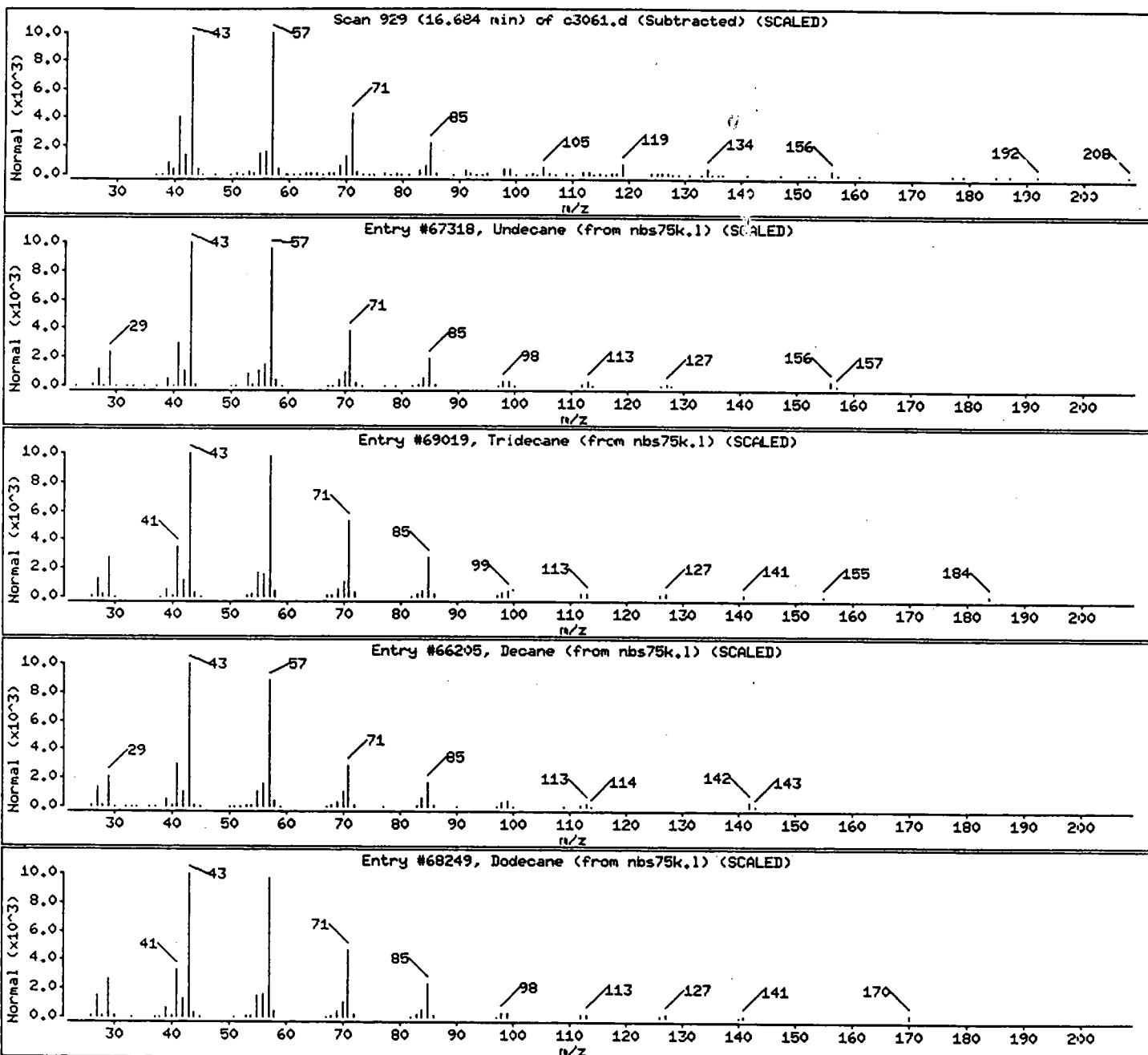
Sample Info: 96866;50;10.4;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Hatch	CAS Number	Library	Entry	Quality	Formula	Weight
C11H24 Alkane						
Undecane	1120-21-4	nbs75k.1	67318	95	C11H24	156
Tridecane	629-50-5	nbs75k.1	69019	86	C13H28	184
Decane	124-18-5	nbs75k.1	66205	86	C10H22	142
Dodecane	112-40-3	nbs75k.1	68249	80	C12H26	170



Date : 13-JUN-97 11:56:00

Client ID: PX-1

Instrument: VOAMS3.i

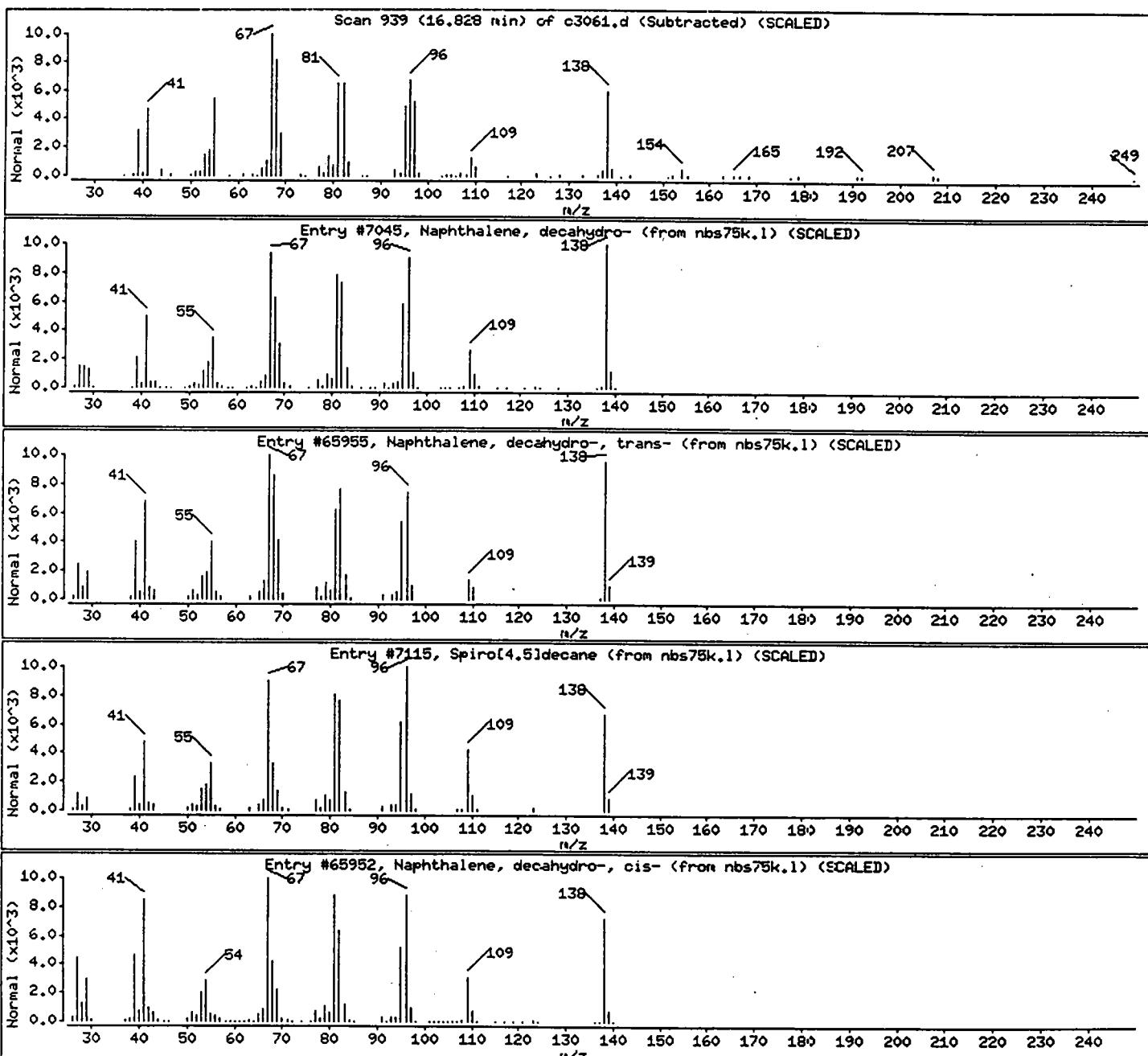
Sample Info: 96866;50;10.4;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Hatch	CAS Number	Library	Entry	Quality	Formula	Weight
Decahydronaphthalene isomer						
Naphthalene, decahydro-	91-17-8	nbs75k.1	7045	94	C10H18	138
Naphthalene, decahydro-, trans-	493-02-7	nbs75k.1	65955	93	C10H18	138
Spiro[4.5]decane	176-63-6	nbs75k.1	7115	70	C10H18	138
Naphthalene, decahydro-, cis-	493-01-6	nbs75k.1	65952	70	C10H18	138



Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13jun97.b/c3061.d

Date : 13-JUN-97 11:56:00

Client ID: PX-1

Instrument: VOAMS3.i

Sample Info: 96866;50;10.4;4;10

Operator: VOAMS 3

Column phase: DB624

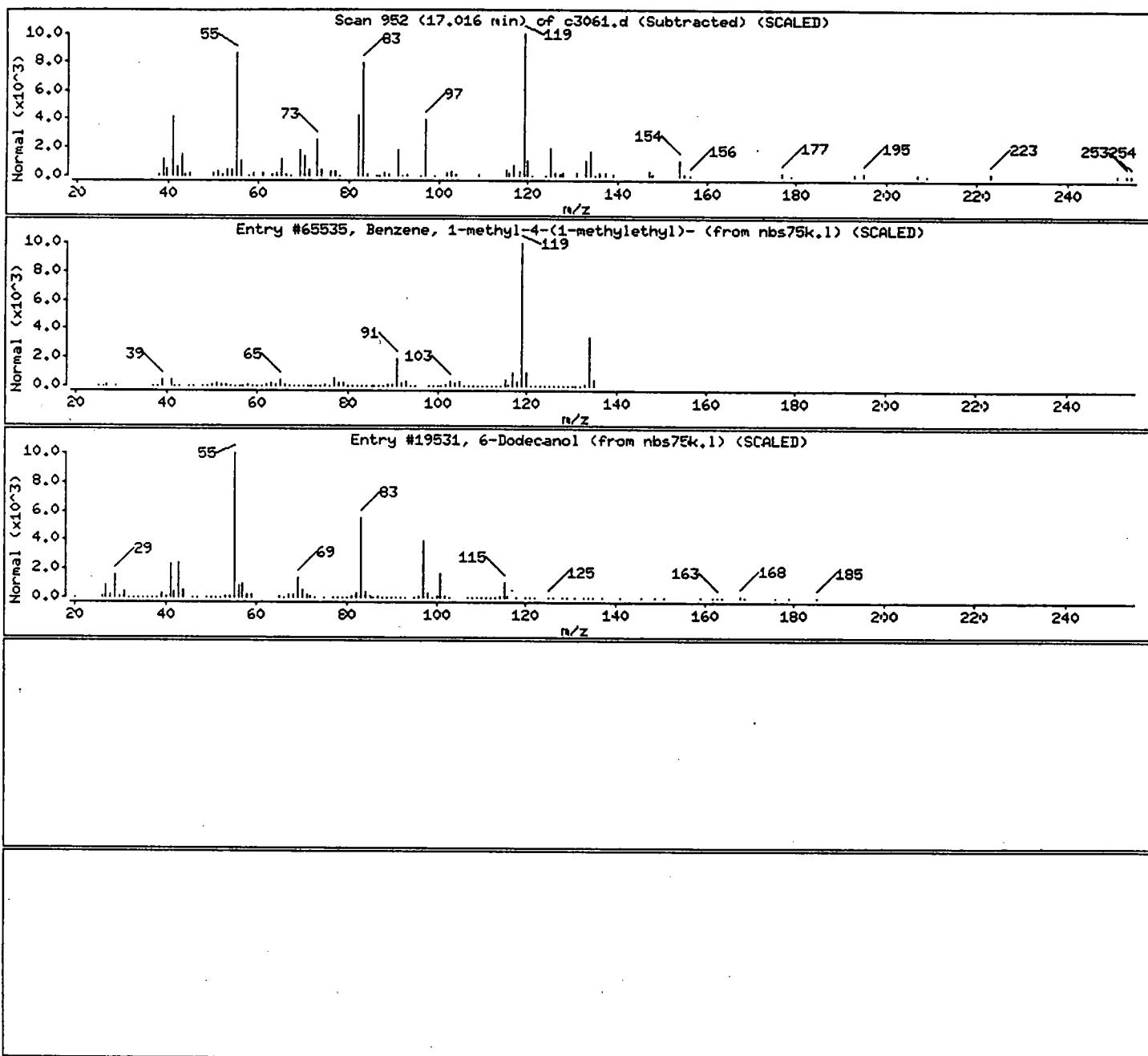
Column diameter: 0.53

Library Search Compound Match

Ethyldimethylbenzene isomer

Benzene, 1-methyl-4-(1-methylethyl)-
6-Dodecanol

	CAS Number	Library	Entry	Quality	Formula	Weight
	99-87-6	nbs75k.1	65535	35	C10H14	134
	6836-38-0	nbs75k.1	19531	22	C12H26O	186



Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13.jun97.b/c3061.d

Date : 13-JUN-97 11:56:00

Client ID: PX-1

Instrument: VOAMS3.i

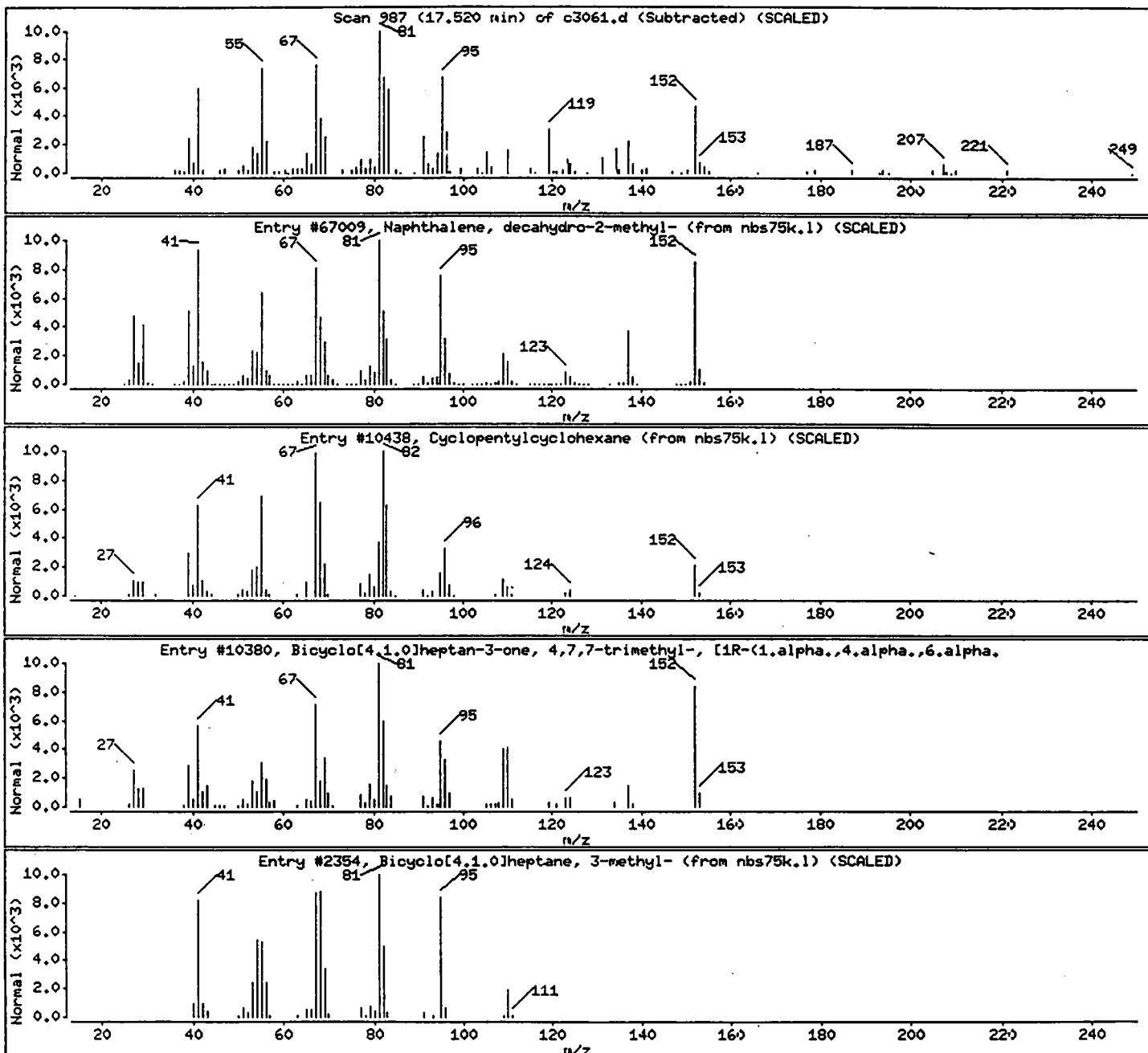
Sample Info: 96866;50;10.4;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Decahydromethylnaphthalene isomer						
Naphthalene, dehydro-2-methyl-	2958-76-1	nbs75k.1	67009	93	C11H20	152
Cyclopentylcyclohexane	1606-08-2	nbs75k.1	10438	64	C11H20	152
Bicyclo[4.1.0]heptan-3-one, 4,7,7-trimethyl-	4176-04-9	nbs75k.1	10380	62	C10H16O	152
Bicyclo[4.1.0]heptane, 3-methyl-	41977-47-3	nbs75k.1	2354	50	C8H14	110



Data File: /chem/VOAMS3.i/824CHICH/05-24-97/13jun97.b/c3061.d

Date : 13-JUN-97 11:56:00

Client ID: PX-1

Instrument: VOAMS3.i

Sample Info: 96866;50;10.4;4;10

Operator: VOAMS 3

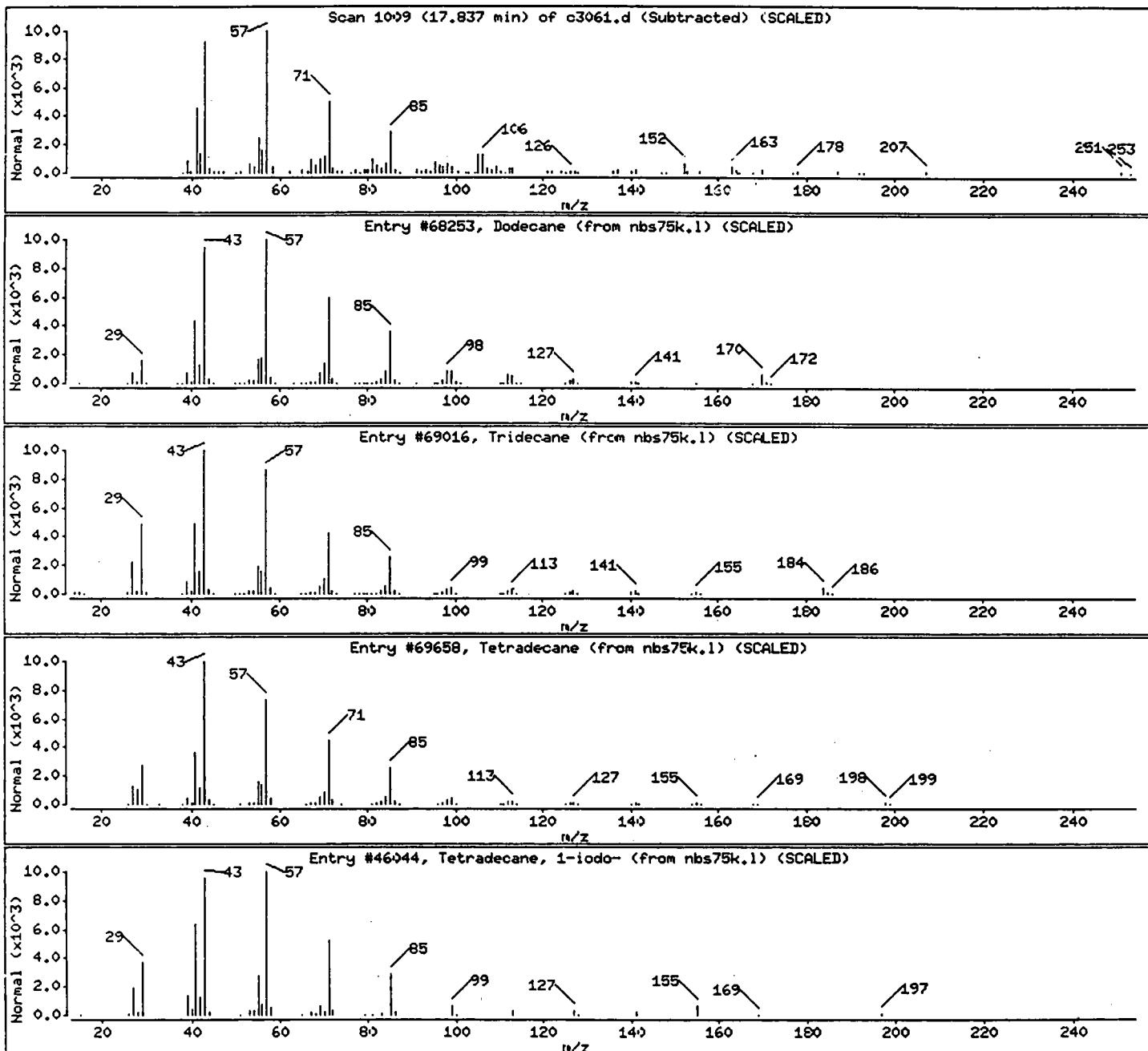
Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

C12H26 Alkane

	CAS Number	Library	Entry	Quality	Formula	Weight
Dodecane	112-40-3	nbs75k.1	68253	94	C12H26	170
Tridecane	629-50-5	nbs75k.1	69016	58	C13H28	184
Tetradecane	629-59-4	nbs75k.1	69658	58	C14H30	198
Tetradecane, 1-iodo-	19218-94-1	nbs75k.1	46044	58	C14H29I	324



Client ID: PX-1
Site: Ortho Diagnostics

Lab Sample No: 96866
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1499.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0
% Moisture: 10

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation Limit</u> <u>Units: ug/kg</u>
N-Nitrosodimethylamine	ND	740
bis(2-Chloroethyl)ether	ND	740
1,3-Dichlorobenzene	ND	740
1,4-Dichlorobenzene	ND	740
1,2-Dichlorobenzene	ND	740
bis(2-chloroisopropyl)ether	ND	740
N-Nitroso-di-n-propylamine	ND	740
Hexachloroethane	ND	740
Nitrobenzene	ND	740
Isophorone	ND	740
bis(2-Chloroethoxy)methane	ND	740
1,2,4-Trichlorobenzene	ND	740
Naphthalene	67	37
Hexachlorobutadiene	ND	740
Hexachlorocyclopentadiene	ND	740
2-Chloronaphthalene	ND	740
Dimethylphthalate	ND	740
Acenaphthylene	ND	37
2,6-Dinitrotoluene	ND	740
Acenaphthene	ND	37
2,4-Dinitrotoluene	ND	740
Diethylphthalate	ND	740
4-Chlorophenyl-phenylether	ND	740
Fluorene	ND	37
N-Nitrosodiphenylamine	ND	740
4-Bromophenyl-phenylether	ND	740
Hexachlorobenzene	ND	740
Phenanthrene	ND	37
Anthracene	ND	37
Di-n-butylphthalate	ND	740
Fluoranthene	ND	37
Pyrene	ND	37
Benzidine	ND	1500
Butylbenzylphthalate	ND	740

Client ID: PX-1
Site: Ortho Diagnostics

Lab Sample No: 96866
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1499.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0
% Moisture: 10

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270B

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
3,3'-Dichlorobenzidine	ND	1500
Benzo(a)anthracene	ND	37
Chrysene	ND	37
bis(2-Ethylhexyl)phthalate	200 J	740
Di-n-octylphthalate	ND	740
Benzo(b)fluoranthene	ND	37
Benzo(k)fluoranthene	ND	37
Benzo(a)pyrene	ND	37
Indeno(1,2,3-cd)pyrene	ND	37
Dibenz(a,h)anthracene	ND	37
Benzo(g,h,i)perylene	ND	37

Client ID: PX-1
Site: Ortho Diagnostics

Lab Sample No: 96866
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1499.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0
% Moisture: 10.4

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Decane	12.56	6000	
2. C10H20 Cycloalkane	13.10	2200	
3. C10H14 Aromatic/ Unknown Alkane	13.32	2500	
4. Unknown Alkane	13.43	2200	
5. Unknown Alkane	13.52	3300	
6. C10H14 Aromatic	13.77	2000	
7. Undecane	13.87	9700	
8. Unknown Aromatic	13.96	1800	
9. Dodecane	15.00	2100	
10. C11H24 Alkane	15.73	940	
11. C15H32 Alkane	16.72	1500	
12. Tetradecane	16.94	1300	
13. Unknown Alkane	17.48	3100	
14. Eicosane	19.01	1200	
15. Unknown Alkane	19.45	2800	
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

42640

Envirotech Research Inc.

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d
Lab Smp Id: 96866 Client Smp ID: PX-1
Inj Date : 19-JUN-97 21:29:00
Operator : BNAMS3 Inst ID: BNAMS3.i
Smp Info : 96866;30;2;2;10.4
Misc Info : V393;PPBN+15;3444;114
Comment :
Method : /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/8270b.m
Meth Date : 20-Jun-97 06:39:03 jeri Quant Type: ISTD
Cal Date : 02-JUN-97 16:23:00 Cal File: t1203.d
Als bottle: 4
Dil Factor: 2.00000
Integrator: HP RTE
Target Version: 3.20 Compound Sublist: PPBNb.sub
Procesing Host: hp735

Concentration Formula: Uf*1000*Vt/(Ws*(100-M)/100)

Name	Value	Description
Uf	1.000	ng unit correction factor
Vt	2.000	Volume of final extract (ml)
Ws	30.000	Weight of sample extracted (g)
M	10.400	% Moisture

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/ml)	FINAL (ug/Kg)
* 79 1,4-Dichlorobenzene-d4	152	12.848	12.845	(1.000)	126473	40		
\$ 76 Nitrobenzene-d5 (SUR)	82	13.807	13.815	(0.919)	123930	19	2800	
* 80 Naphthalene-d8	136	15.031	15.036	(1.000)	544352	40		
31 Naphthalene	128	15.064	15.069	(1.002)	7053	0.45	67	
\$ 77 2-Fluorobiphenyl (SUR)	172	16.819	16.824	(0.937)	161241	21	3100	
* 82 Acenaphthene-d10	164	17.953	17.954	(1.000)	223366	40		
* 83 Phenanthrene-d10	188	20.412	20.414	(1.000)	335352	40		
\$ 78 Terphenyl-d14 (SUR)	244	23.023	23.026	(0.929)	145144	22	3200	
* 81 Chrysene-d12	240	24.786	24.796	(1.000)	274270	40		
63 bis(2-Ethylhexyl)phthalate	149	24.732	24.736	(0.998)	11546	1.3	200(a)	
* 84 Perylene-d12	264	28.117	28.110	(1.000)	269877	40		

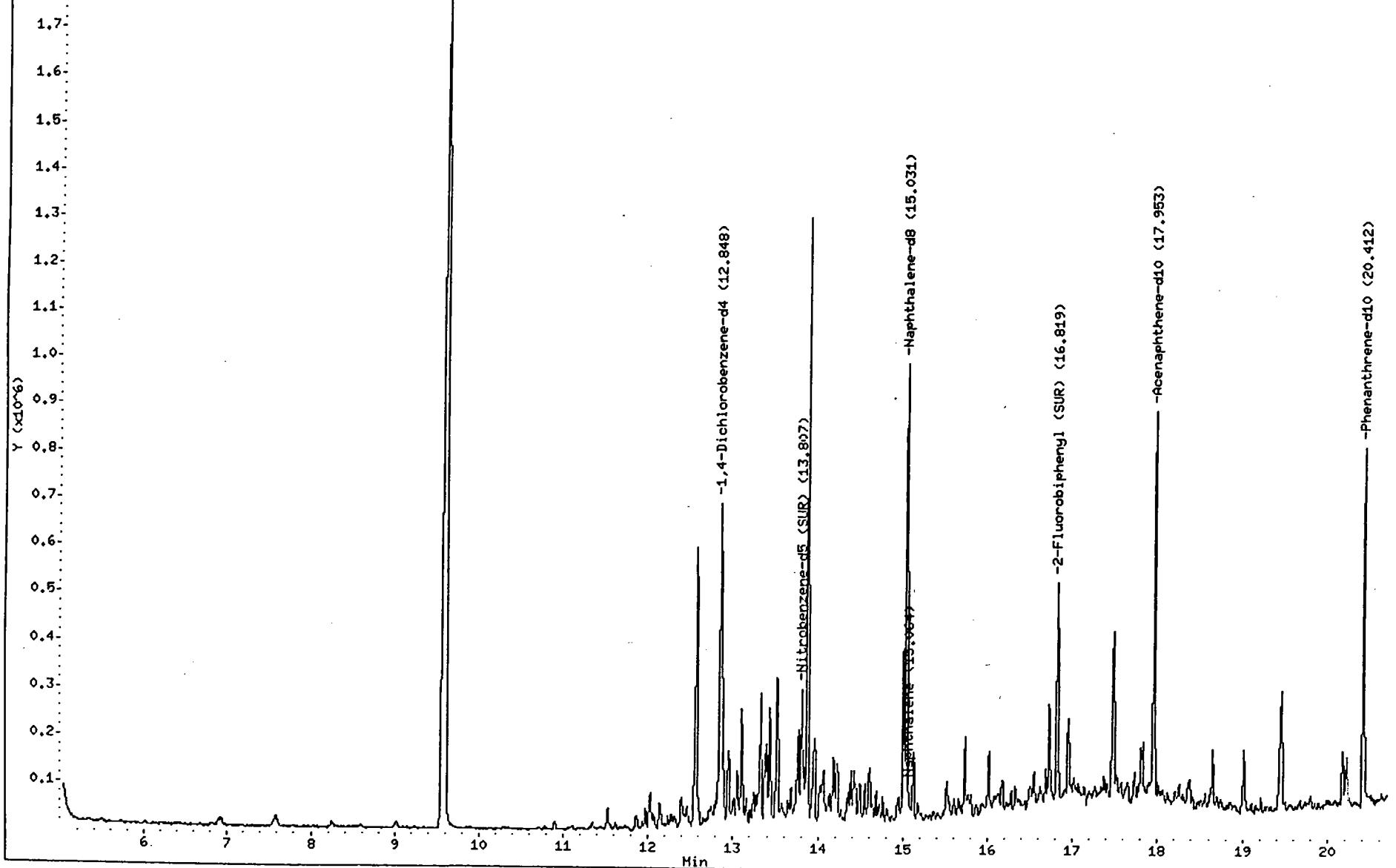
Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d
Date : 19-JUN-97 21:29:00
Client ID: PX-1
Sample Info: 96866;30;2;2;10.4

Column phase: DB-5

Instrument: BNAMS3.i

Operator: BNAMS3
Column diameter: 0.25

/chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d (Part 1 of 2)



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Sample Info: 96866;30;2;2;10.4

Column phase: DB-5

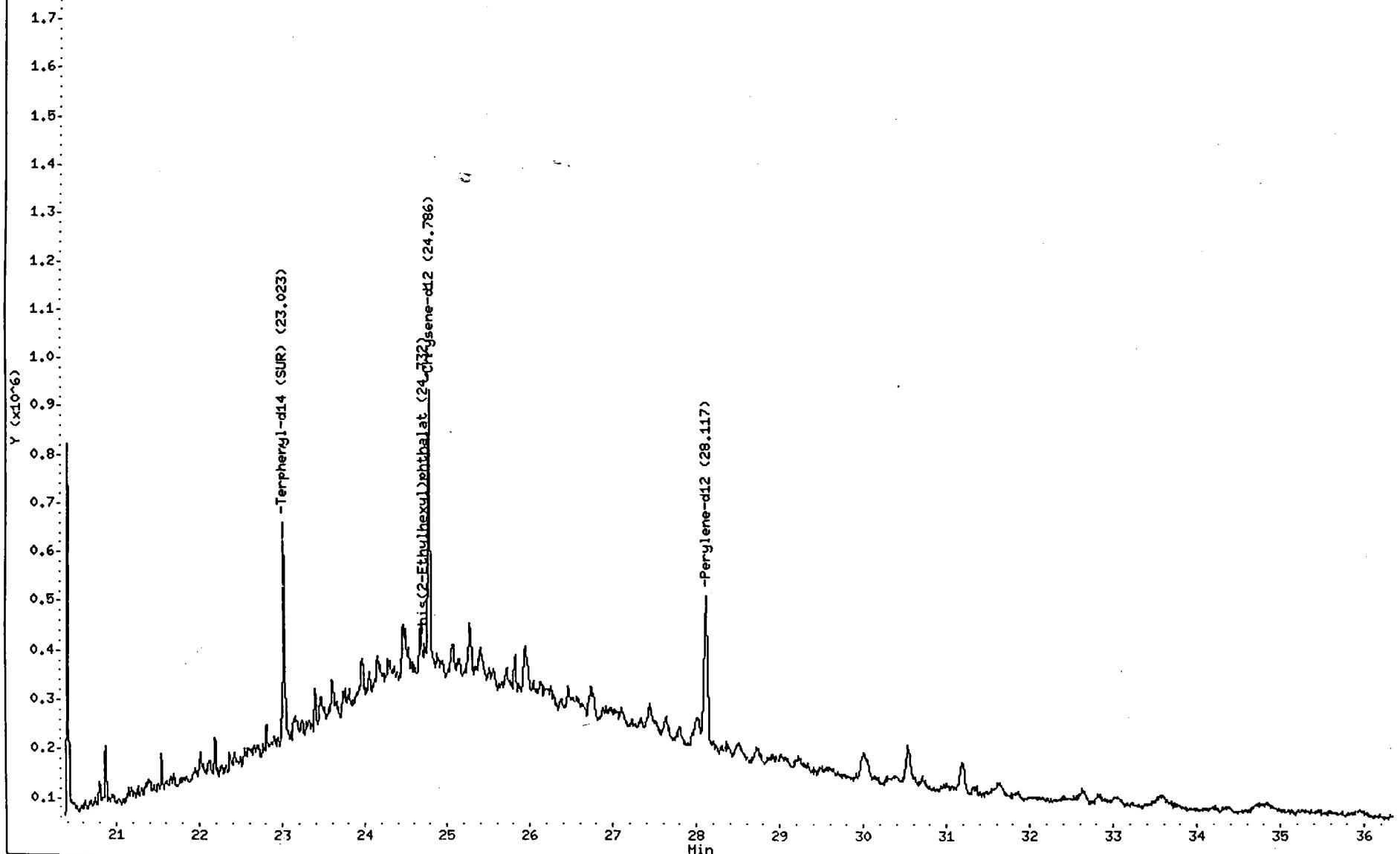
Instrument: BNAMS3.i

Operator: BNAMS3

Column diameter: 0.25

60

/chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d (Part 2 of 2)



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

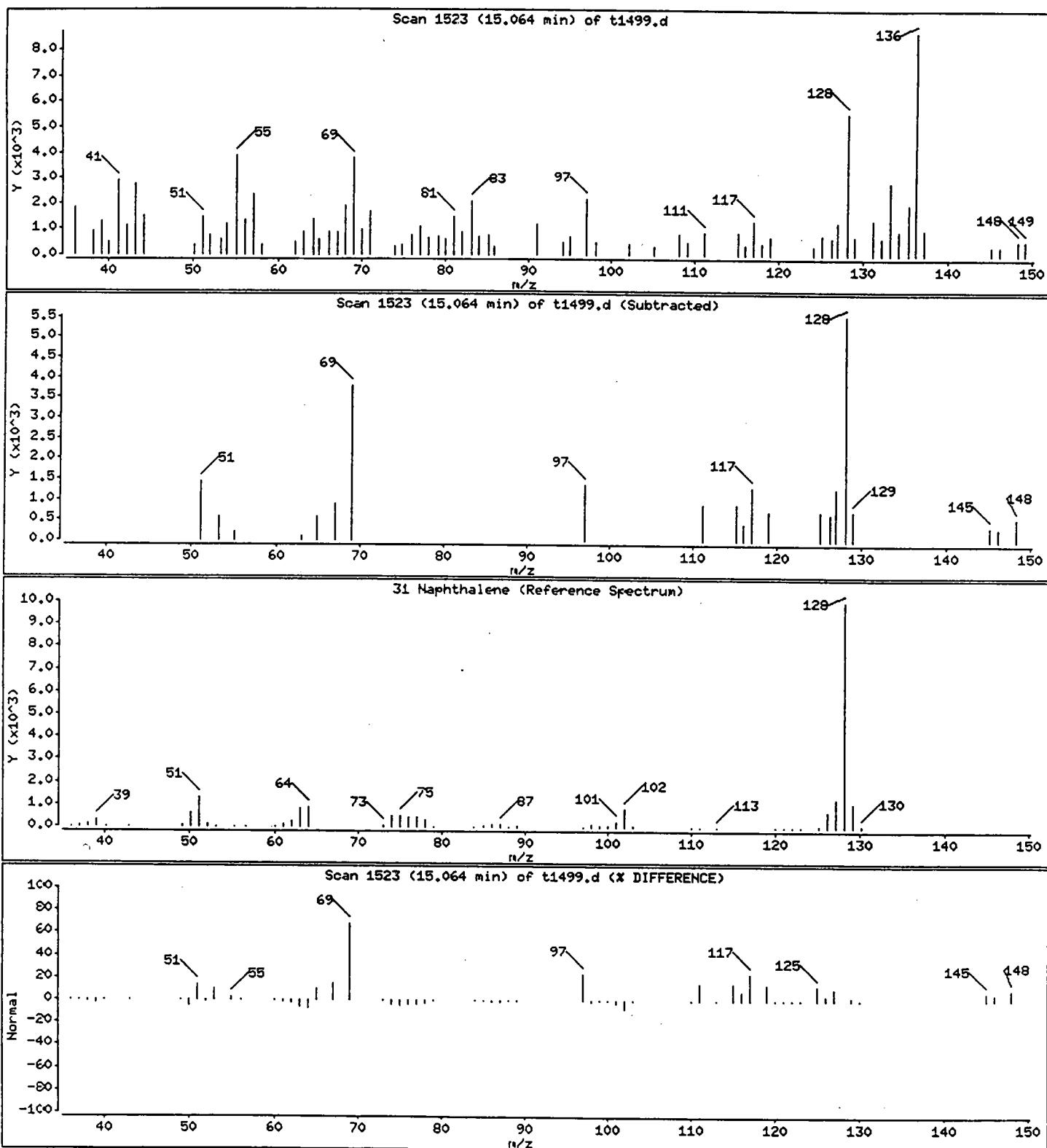
Sample Info: 96866;30;2;2;10.4

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

31 Naphthalene



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

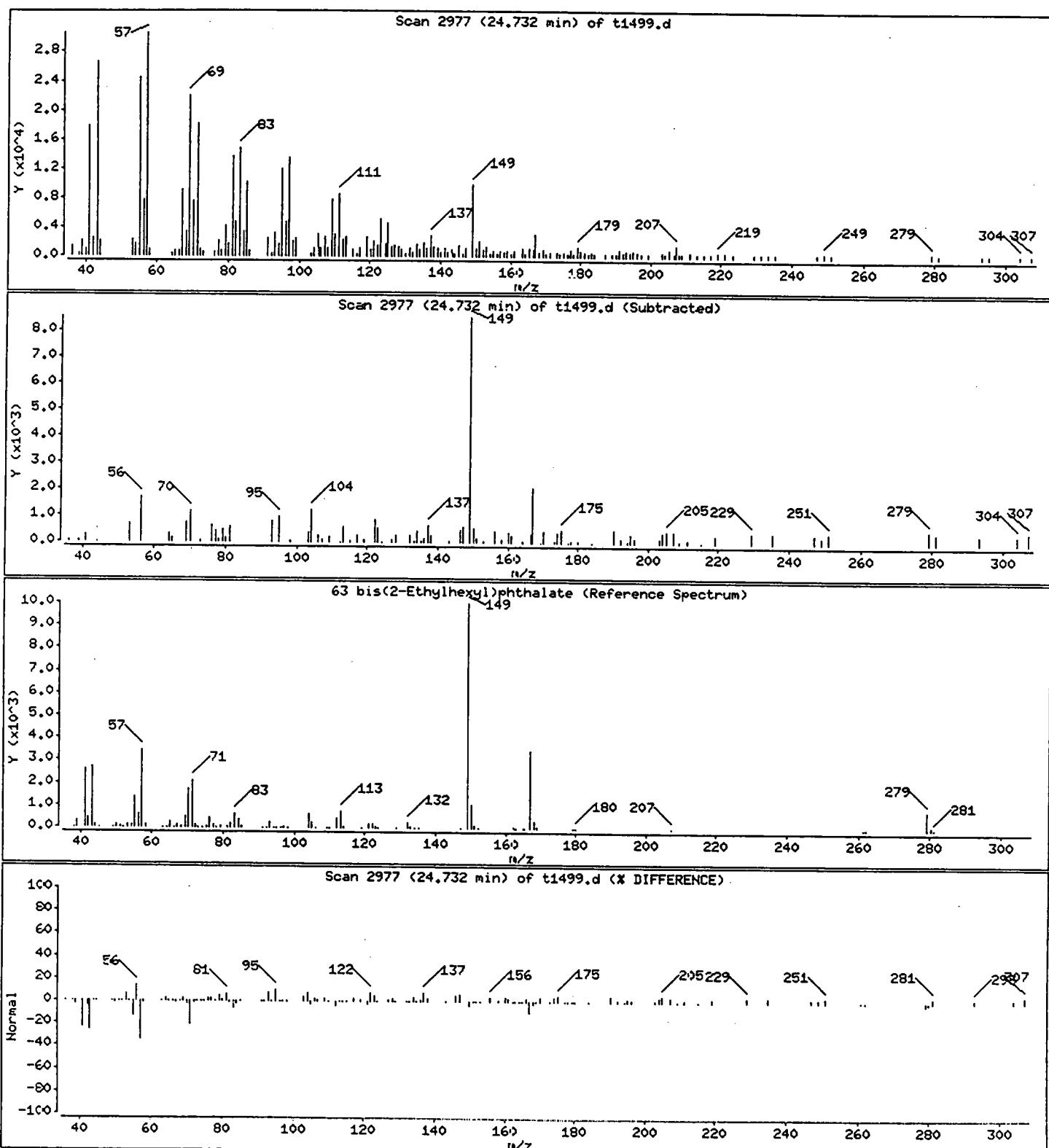
Sample Info: 96866;30;2;2;10.4

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

63 bis(2-Ethylhexyl)phthalate



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

Sample Info: 96866;30;2;2;10,4

Operator: BNAMS3

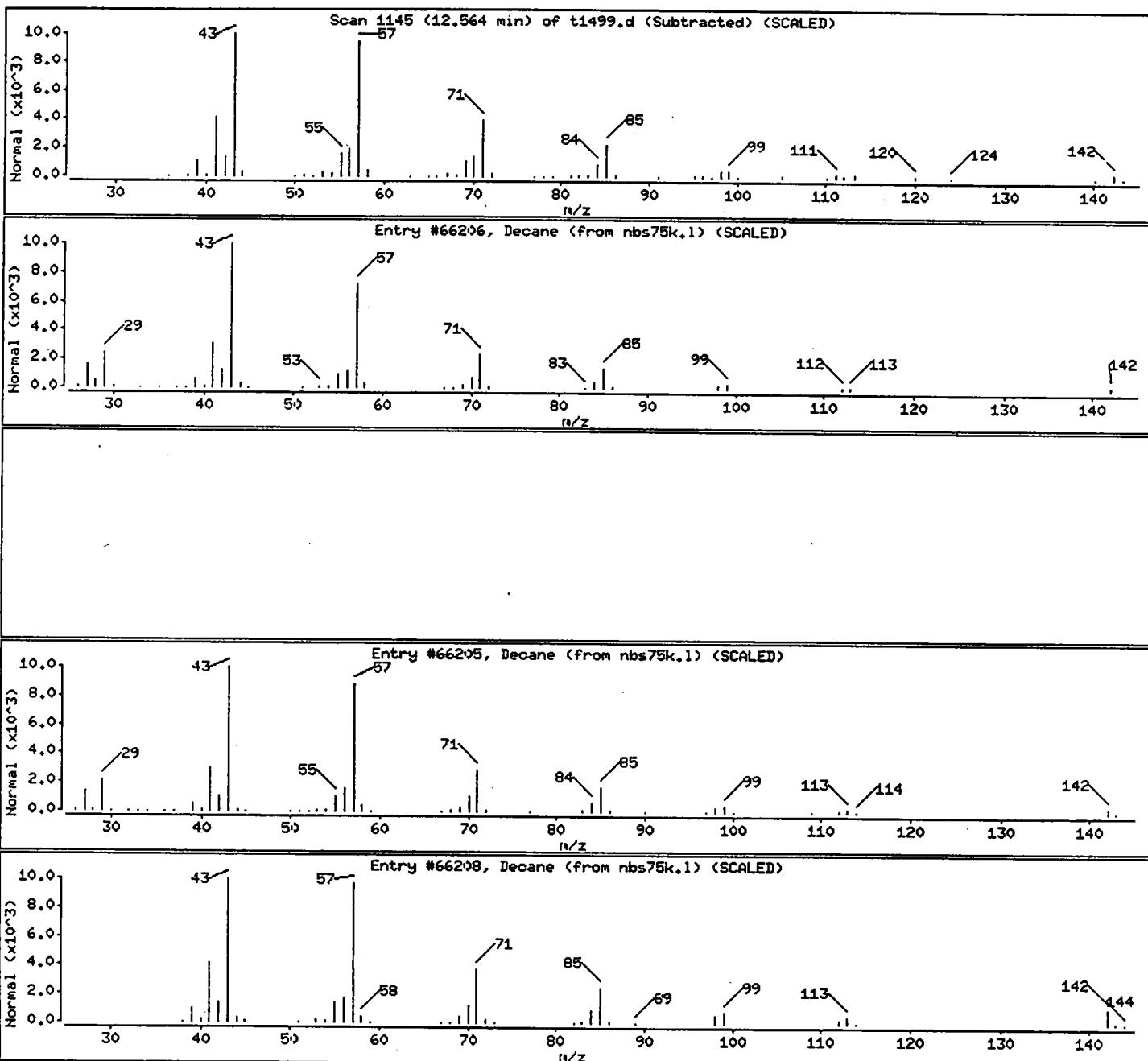
Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

CAS Number Library Entry Quality Formula Weight

Decane	124-18-5	nbs75k,1	66206	94	C10H22	142
C10H22 Alkane			0	0		0
Decane	124-18-5	nbs75k,1	66205	93	C10H22	142
Decane	124-18-5	nbs75k,1	66208	90	C10H22	142



Data File: /chem/BNAHS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAHS3.i

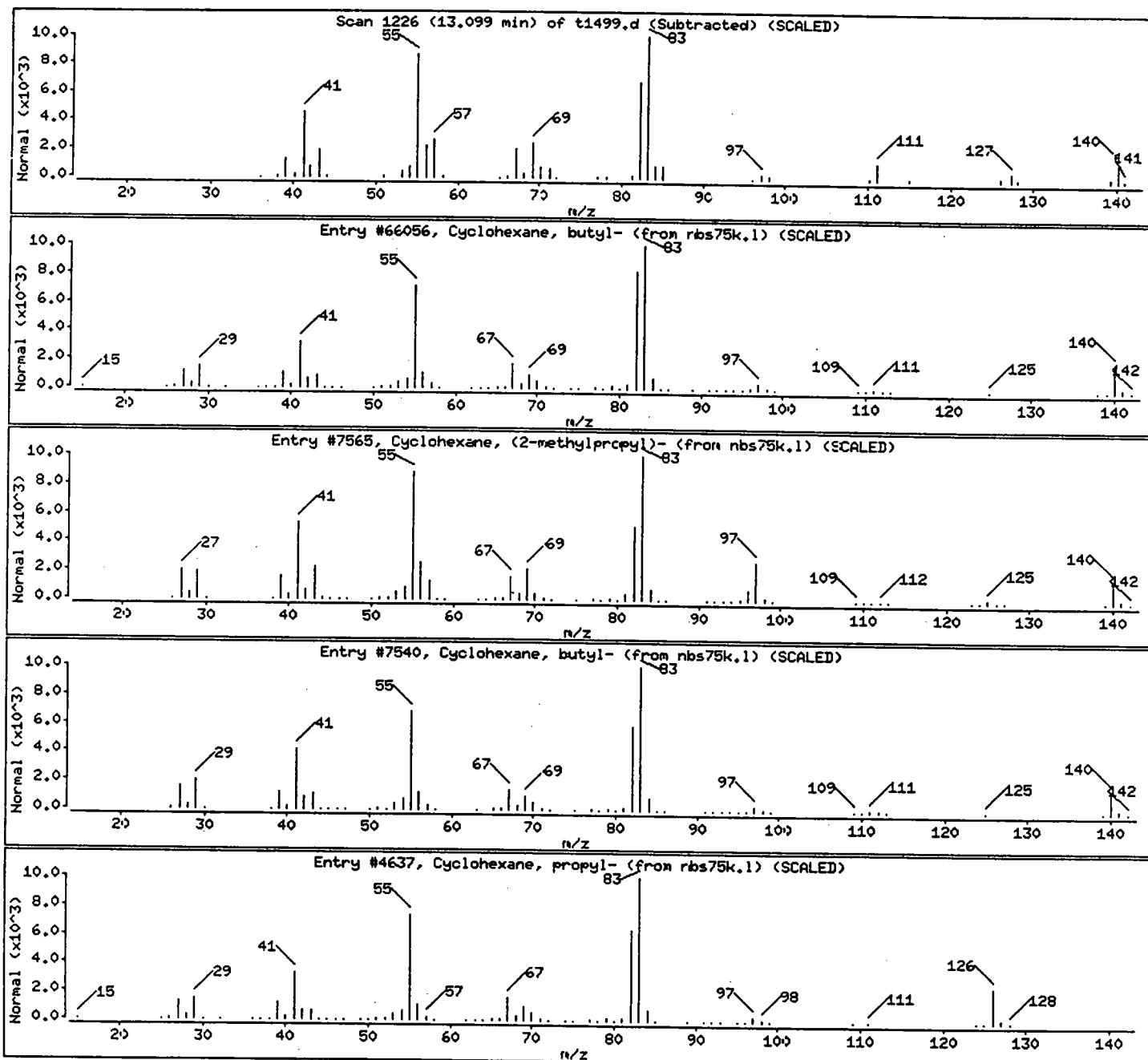
Sample Info: 96866;30;2;2;10.4

Operator: BNAHS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Hatch	CAS Number	Library	Entry	Quality	Formula	Weight
C10H20 Cycloalkane		nbs75k.1	66056	87	C10H20	140
Cyclohexane, (2-methylpropyl)-	1678-98-4	nbs75k.1	7565	72	C10H20	140
Cyclohexane, butyl-	1678-93-9	nbs75k.1	7540	64	C10H20	140
Cyclohexane, propyl-	1678-92-8	nbs75k.1	4637	64	C9H18	126



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

Sample Info: 96866;30;2;2;10.4

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

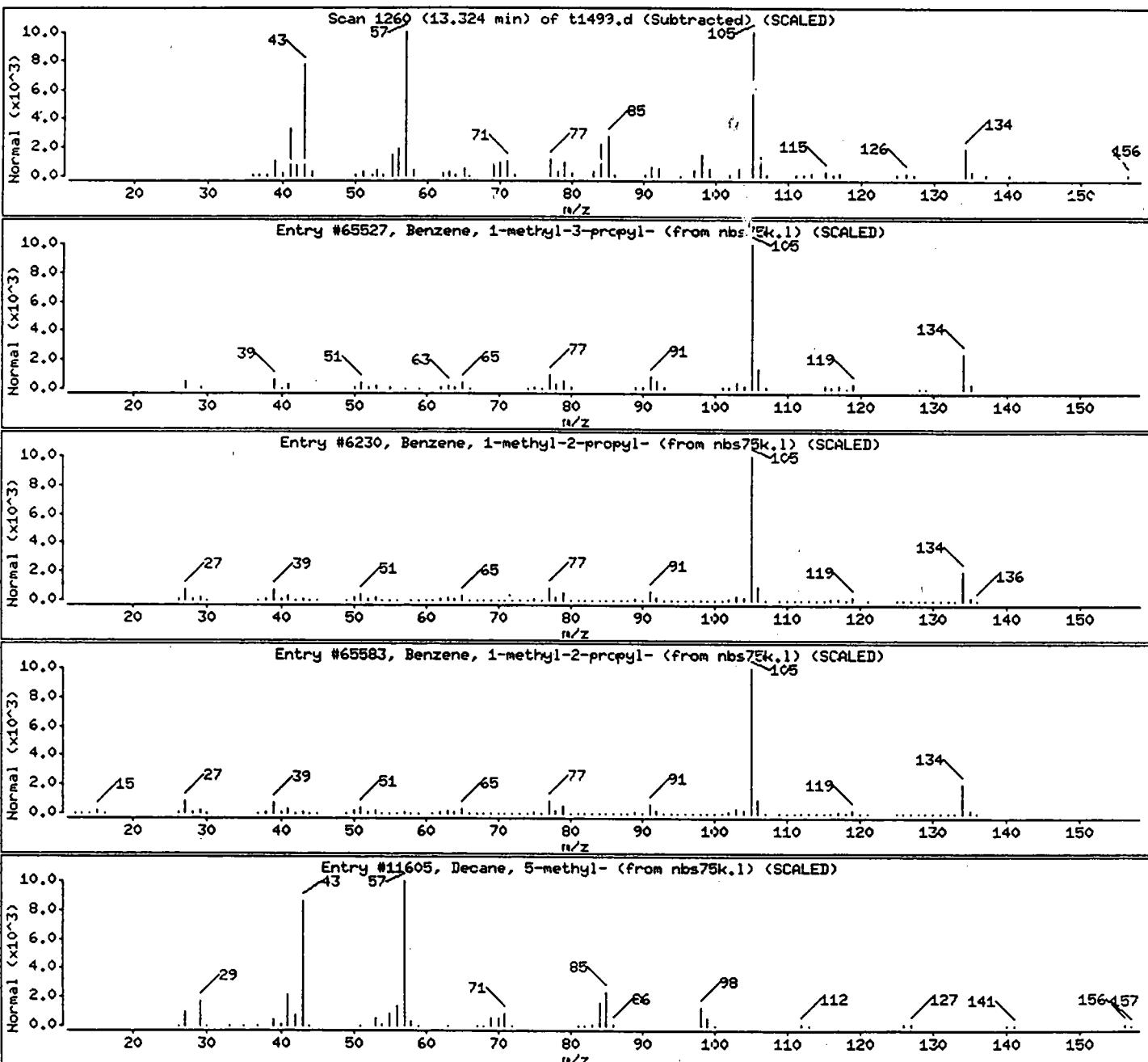
C10H14 Aromatic/ Unknown Alkane

Benzene, 1-methyl-3-propyl-

CAS Number	Library	Entry	Quality	Formula	Weight
1074-43-7	nbs75k.1	65527	46	C10H14	134
1074-17-5	nbs75k.1	6230	46	C10H14	134
1074-17-5	nbs75k.1	65583	46	C10H14	134
13181-35-4	nbs75k.1	11605	46	C11H24	156

Benzene, 1-methyl-2-propyl-

Decane, 5-methyl-



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

Sample Info: 96866;30;2;2;10.4

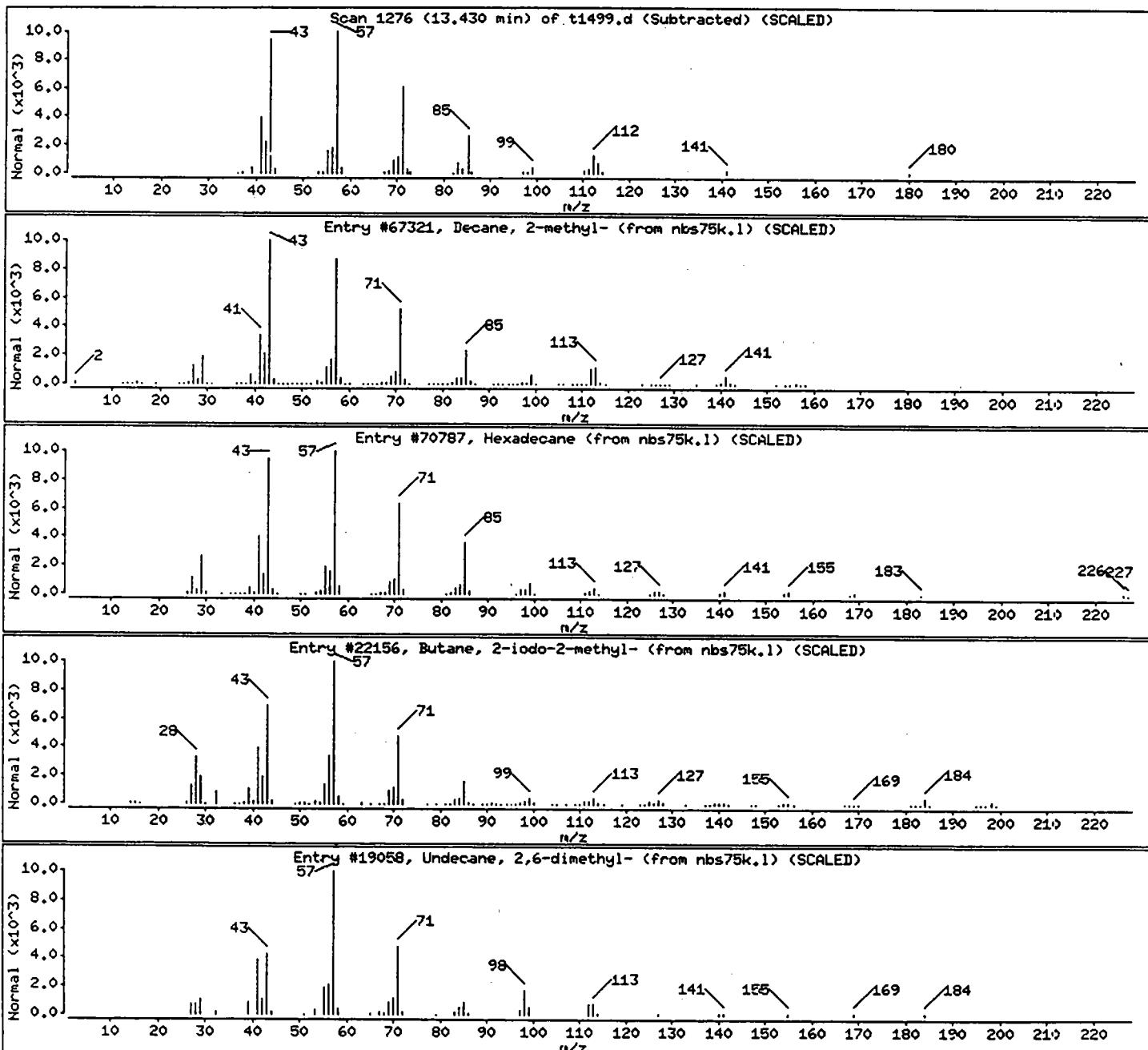
Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Hatch

	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Alkane						
Decane, 2-methyl-	6975-98-0	nbs75k.1	67321	78	C11H24	156
Hexadecane	544-76-3	nbs75k.1	70787	64	C16H34	226
Butane, 2-iodo-2-methyl-	594-38-7	nbs75k.1	22156	64	C5H11I	198
Undecane, 2,6-dimethyl-	17301-23-4	nbs75k.1	19058	59	C13H28	184



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

Sample Info: 96866;30;2;2;10.4

Operator: BNAMS3

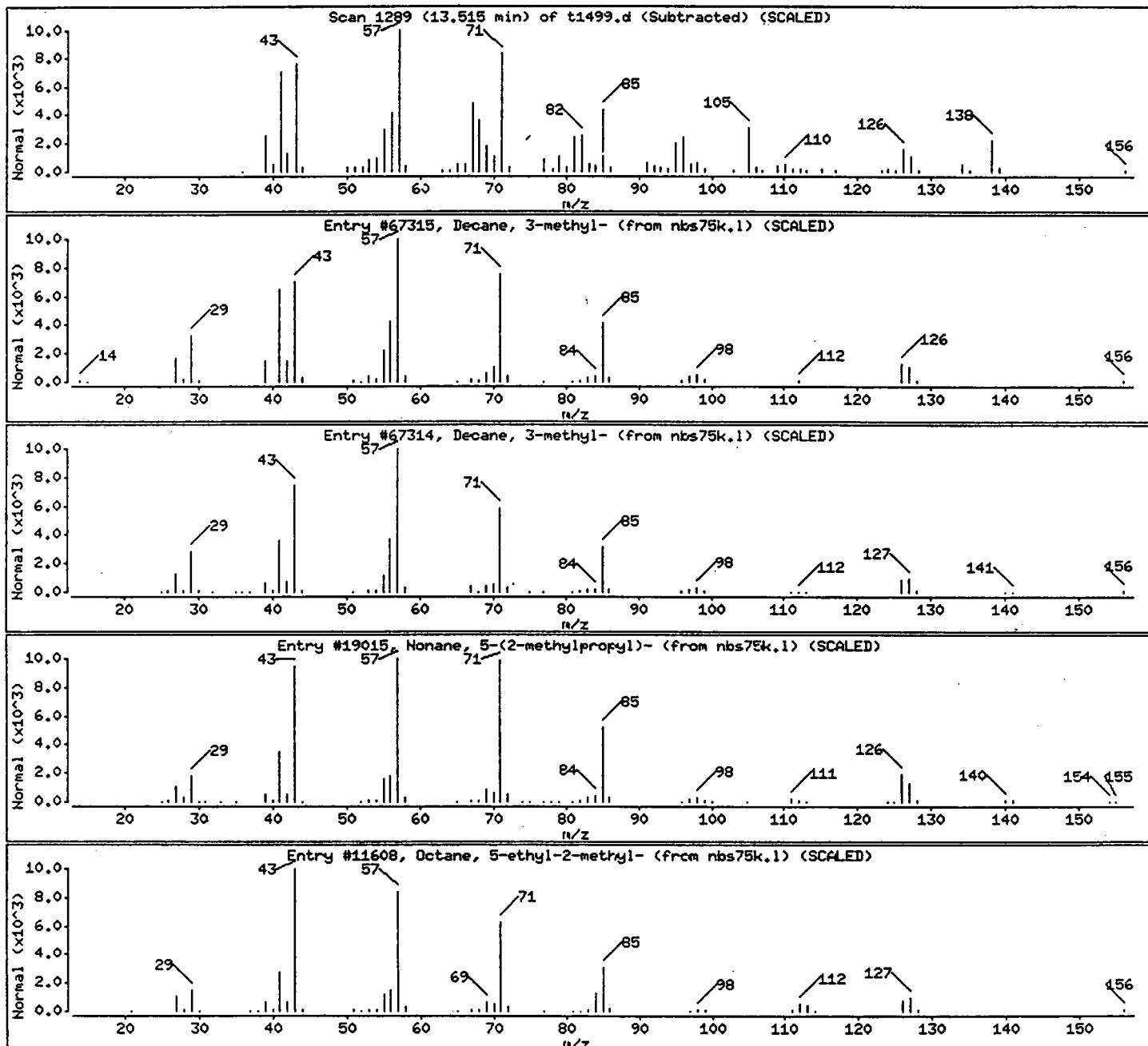
Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

Unknown Alkane

	CAS Number	Library	Entry	Quality	Formula	Weight
Decane, 3-methyl-	13151-34-3	nbs75k.1	67315	95	C11H24	156
Decane, 3-methyl-	13151-34-3	nbs75k.1	67314	90	C11H24	156
Nonane, 5-(2-methylpropyl)-	62185-53-9	nbs75k.1	19015	43	C13H28	184
Octane, 5-ethyl-2-methyl-	62016-18-6	nbs75k.1	11608	43	C11H24	156



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

Sample Info: 96866;30;2;2;10.4

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

C10H14 Aromatic

Benzene, 1-methyl-4-(1-methylethyl)-
Benzene, 1-methyl-3-(1-methylethyl)-
Benzene, 2-ethyl-1,4-dimethyl-
Benzene, 1-ethyl-2,3-dimethyl-

CAS Number

Library

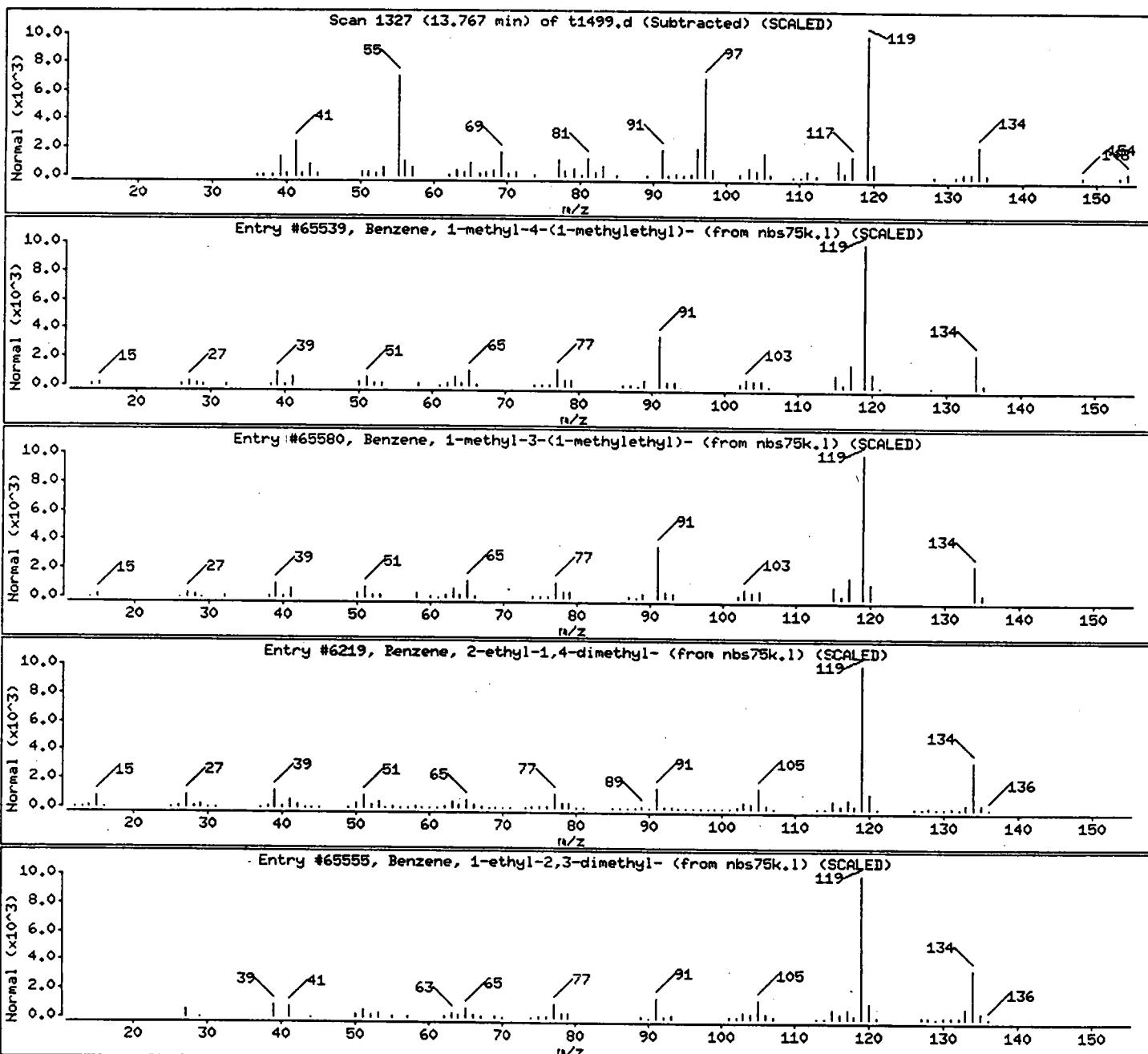
Entry

Quality

Formula

Weight

99-87-6 nbs75k.1 65539 91 C10H14 134
535-77-3 nbs75k.1 65580 83 C10H14 134
1758-88-9 nbs75k.1 6219 64 C10H14 134
933-98-2 nbs75k.1 65555 64 C10H14 134



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

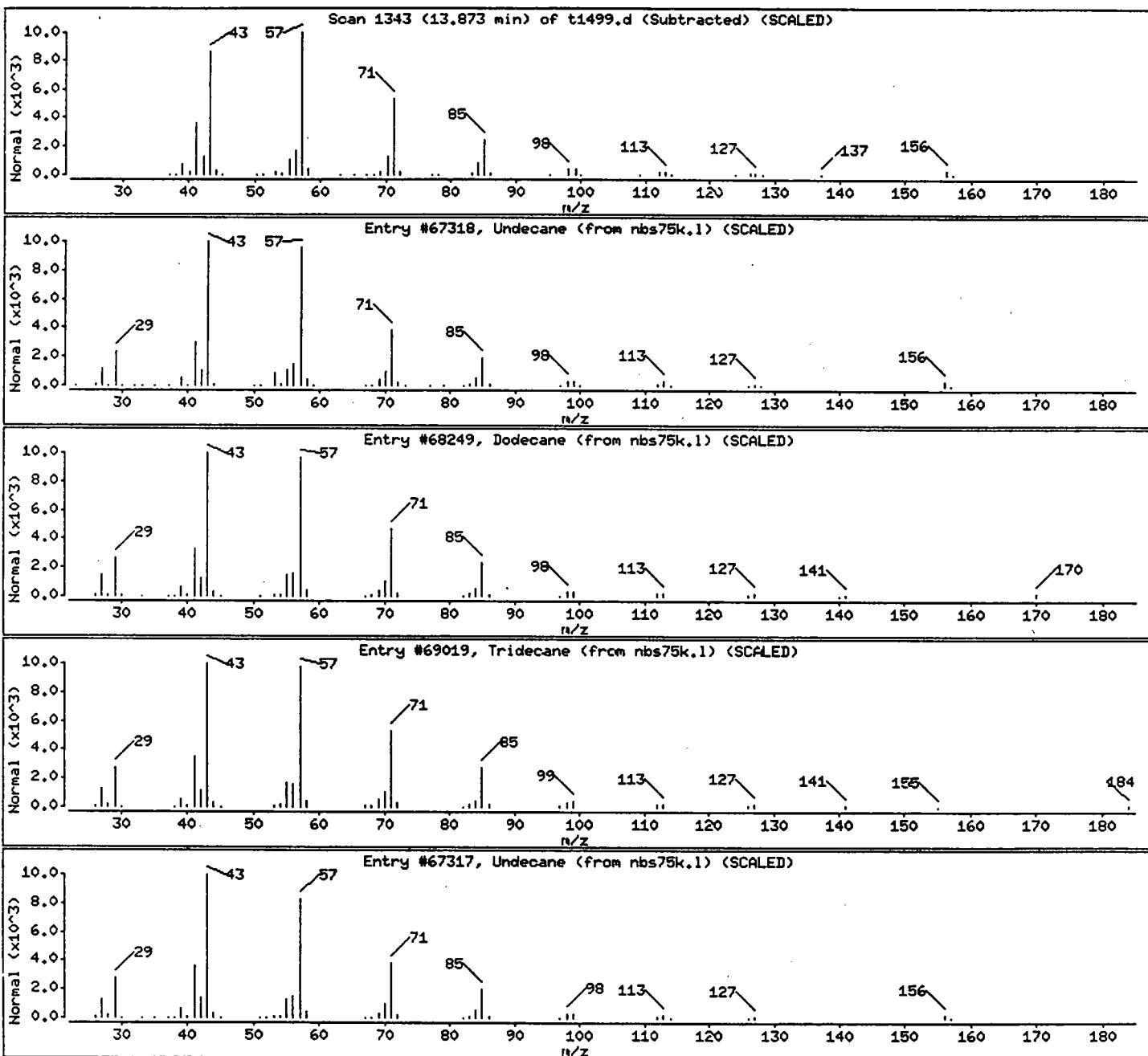
Sample Info: 96866;30;2;2;10.4

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Hatch	CAS Number	Library	Entry	Quality	Formula	Weight
Undecane	1120-21-4	nbs75k.1	67318	93	C11H24	156
Dodecane	112-40-3	nbs75k.1	68249	90	C12H26	170
Tridecane	629-50-5	nbs75k.1	69019	90	C13H28	184
Undecane	1120-21-4	nbs75k.1	67317	87	C11H24	156



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

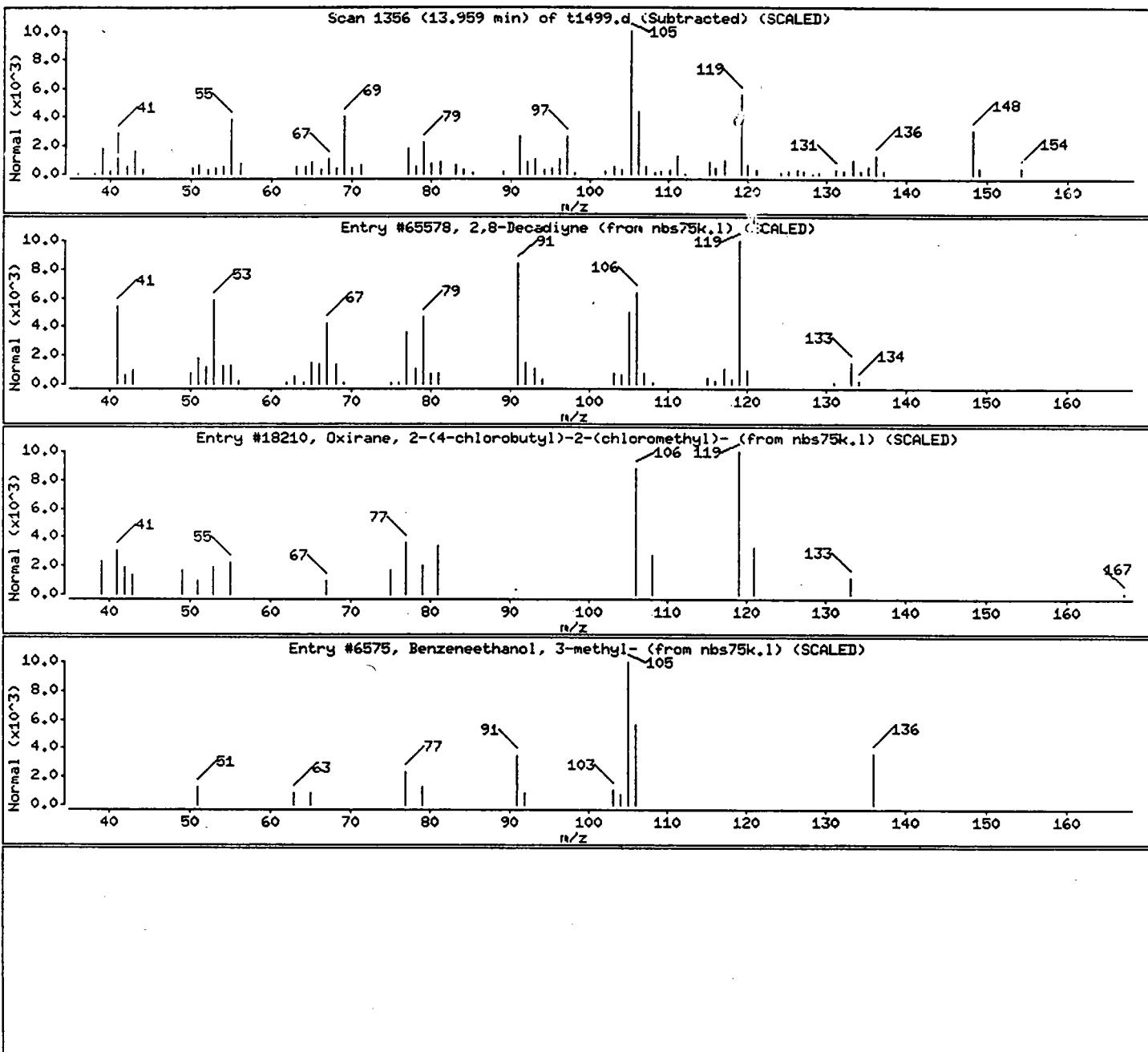
Sample Info: 96866;30;2;2;10.4

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aromatic						
2,8-Decadiyne	4116-93-2	nbs75k.1	65578	60	C10H14	134
Oxirane, 2-(4-chlorobutyl)-2-(chloromethyl)	0-00-0	nbs75k.1	18210	35	C7H12Cl2O	182
Benzeneethanol, 3-methyl-	1875-99-4	nbs75k.1	6575	22	C9H12O	136



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

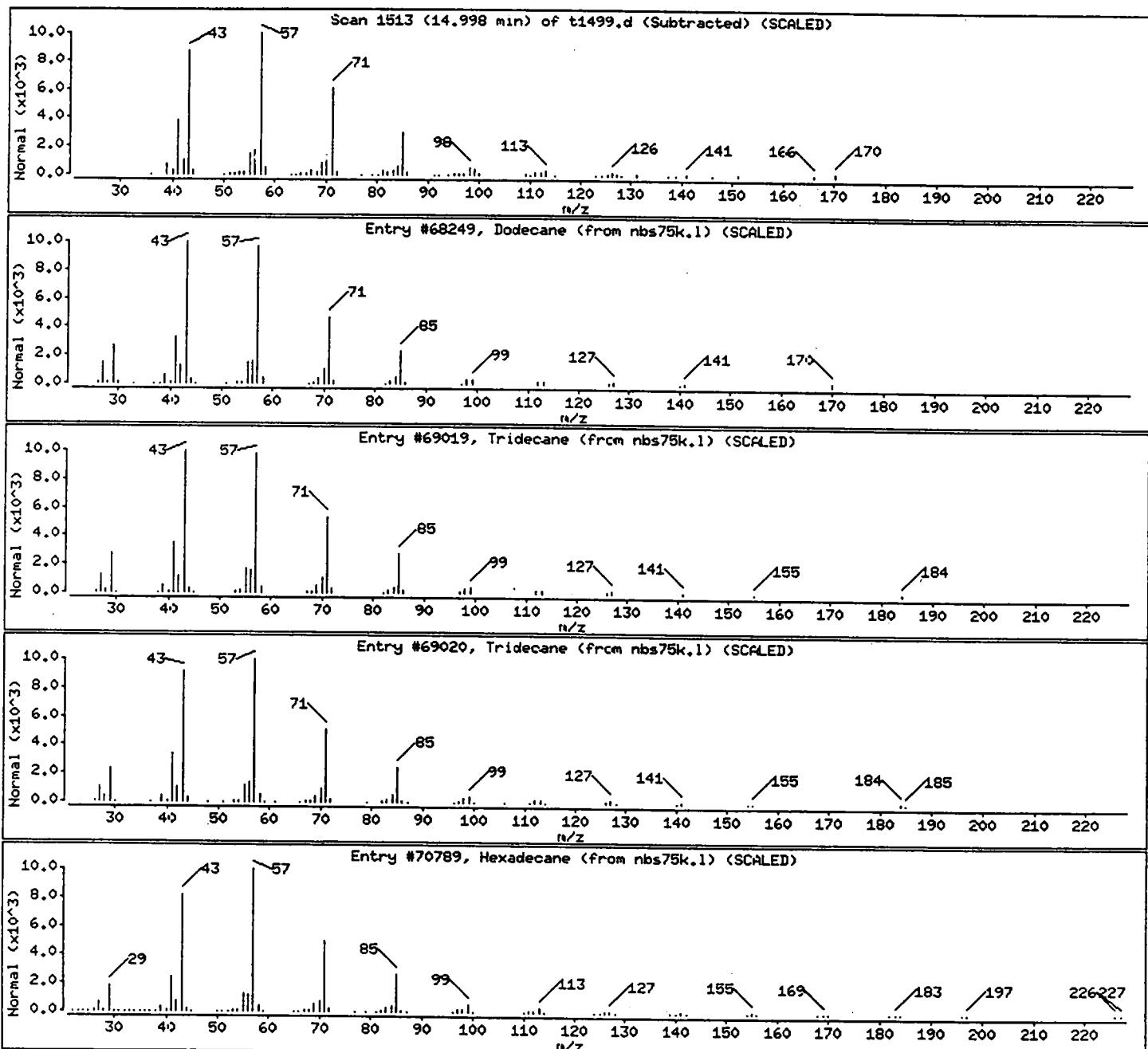
Sample Info: 96866;30;2;2;10.4

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Dodecane	112-40-3	nbs75k.l	68249	90	C12H26	170
Tridecane	629-50-5	nbs75k.l	69019	90	C13H28	184
Tridecane	629-50-5	nbs75k.l	69020	90	C13H28	184
Hexadecane	544-76-3	nbs75k.l	70789	86	C16H34	226



Data File: /chem/BNAMS3.i/8270/06-02-97/19.jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

Sample Info: 96866;30;2;2;10.4

Operator: BNAMS3

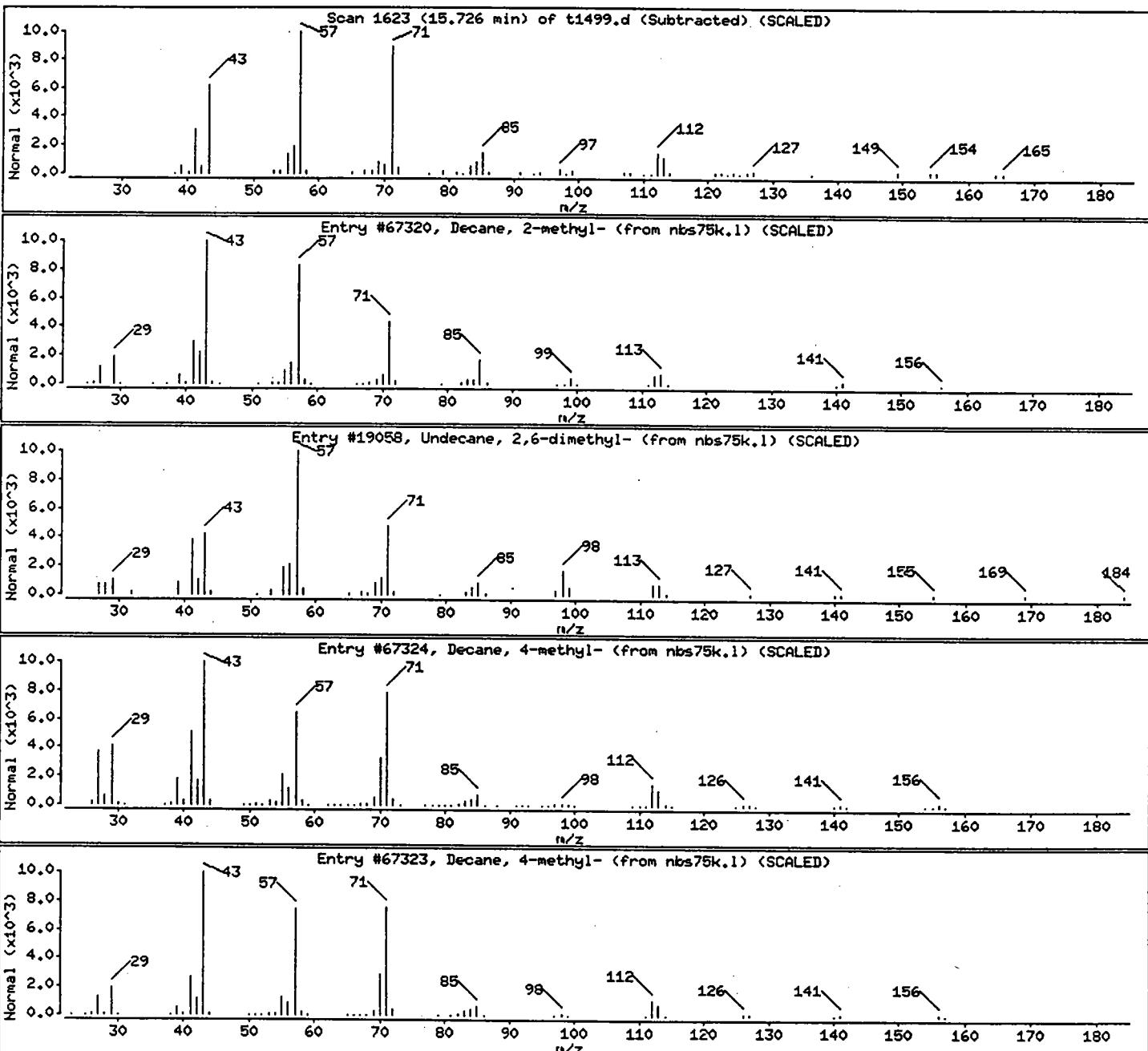
Column phase: DB-5

Column diameter: 0.25

Library Search Compound Hatch

C11H24 Alkane

	CAS Number	Library	Entry	Quality	Formula	Weight
Decane, 2-methyl-	6975-98-0	nbs75k.1	67320	78	C11H24	156
Undecane, 2,6-dimethyl-	17301-23-4	nbs75k.1	19058	78	C13H28	184
Decane, 4-methyl-	2847-72-5	nbs75k.1	67324	78	C11H24	156
Decane, 4-methyl-	2847-72-5	nbs75k.1	67323	72	C11H24	156



Data File: /chem/BNAHS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAHS3.i

Sample Info: 96866;30;2;2;10.4

Operator: BNAHS3

Column phase: DB-5

Column diameter: 0.25

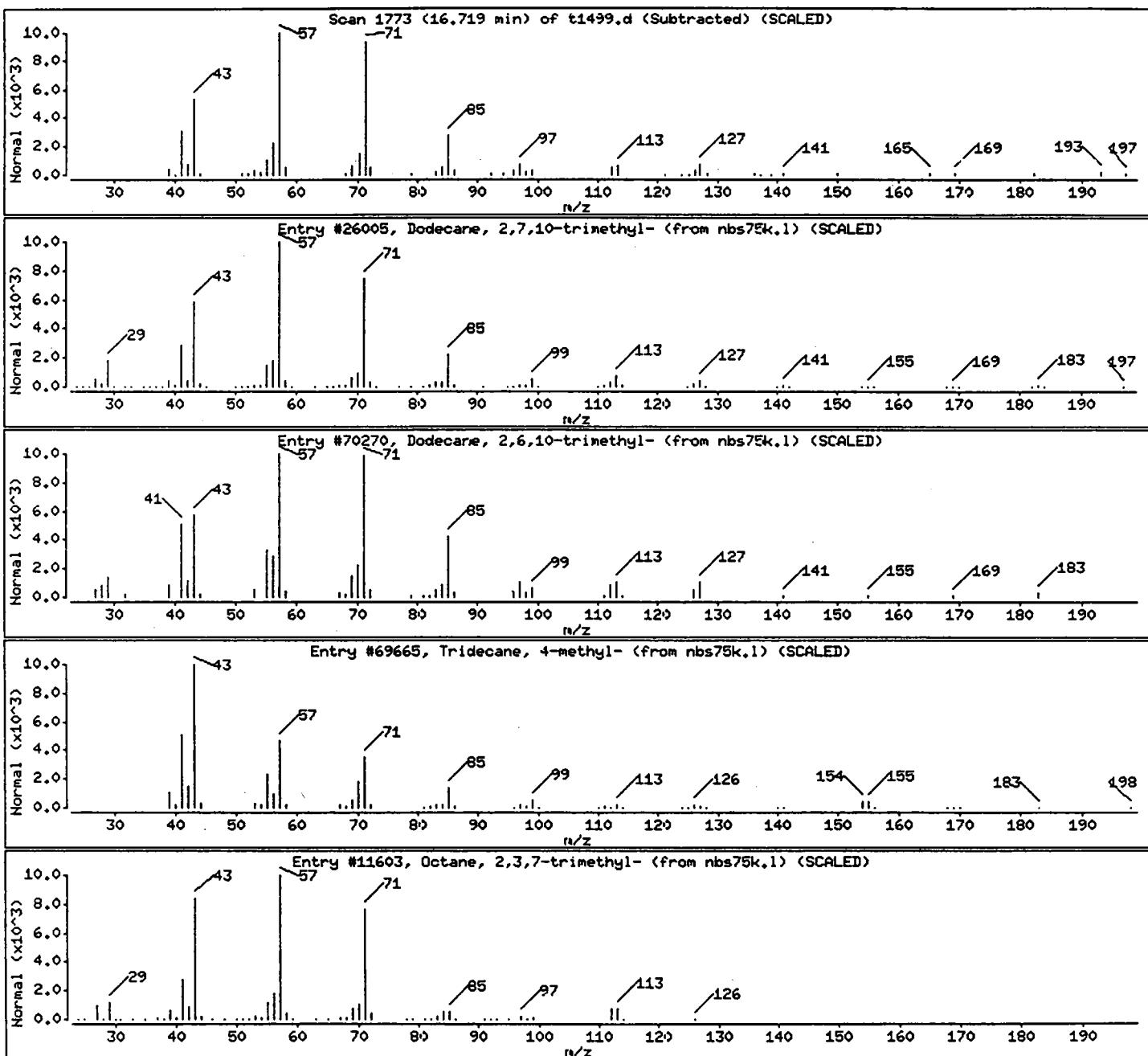
Library Search Compound Match

C15H32 Alkane

Dodecane, 2,7,10-trimethyl-

	CAS Number	Library	Entry	Quality	Formula	Weight
Dodecane, 2,7,10-trimethyl-	74645-98-0	nbs75k.1	26005	90	C15H32	212
Dodecane, 2,6,10-trimethyl-	3891-98-3	nbs75k.1	70270	83	C15H32	212
Tridecane, 4-methyl-	26730-12-1	nbs75k.1	69665	78	C14H30	198
Octane, 2,3,7-trimethyl-	62016-34-6	nbs75k.1	11603	59	C11H24	156

Octane, 2,3,7-trimethyl-



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

Sample Info: 96866;30;2;2;10.4

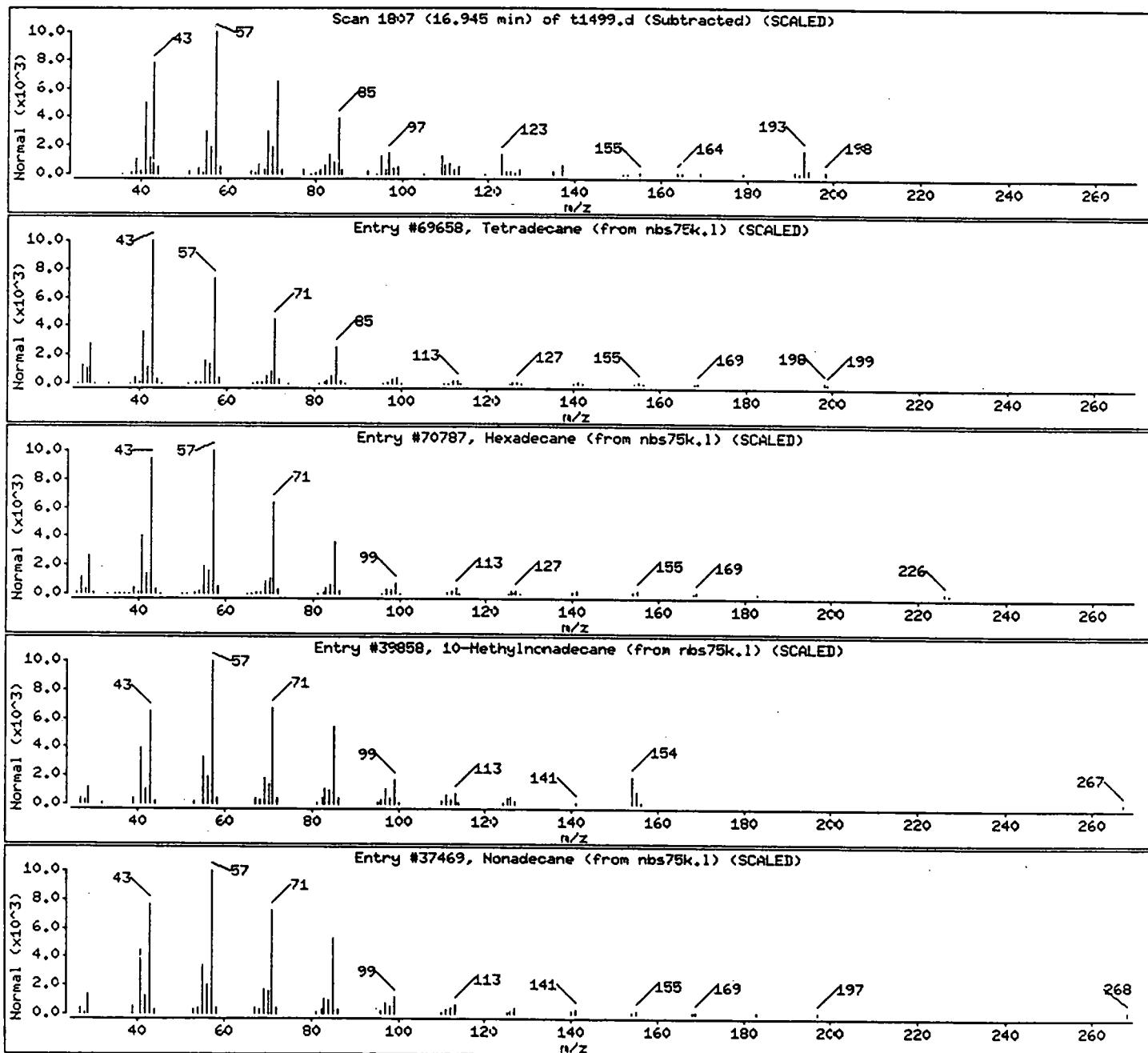
Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

	CAS Number	Library	Entry	Quality	Formula	Weight
Tetradecane	629-59-4	nbs75k.1	69658	64	C14H30	198
Hexadecane	544-76-3	nbs75k.1	70787	58	C16H34	226
10-Methylnonadecane	0-00-0	nbs75k.1	39858	58	C20H42	282
Nonadecane	629-92-5	nbs75k.1	37469	58	C19H40	268



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAMS3.i

Sample Info: 96866;30;2;2;10.4

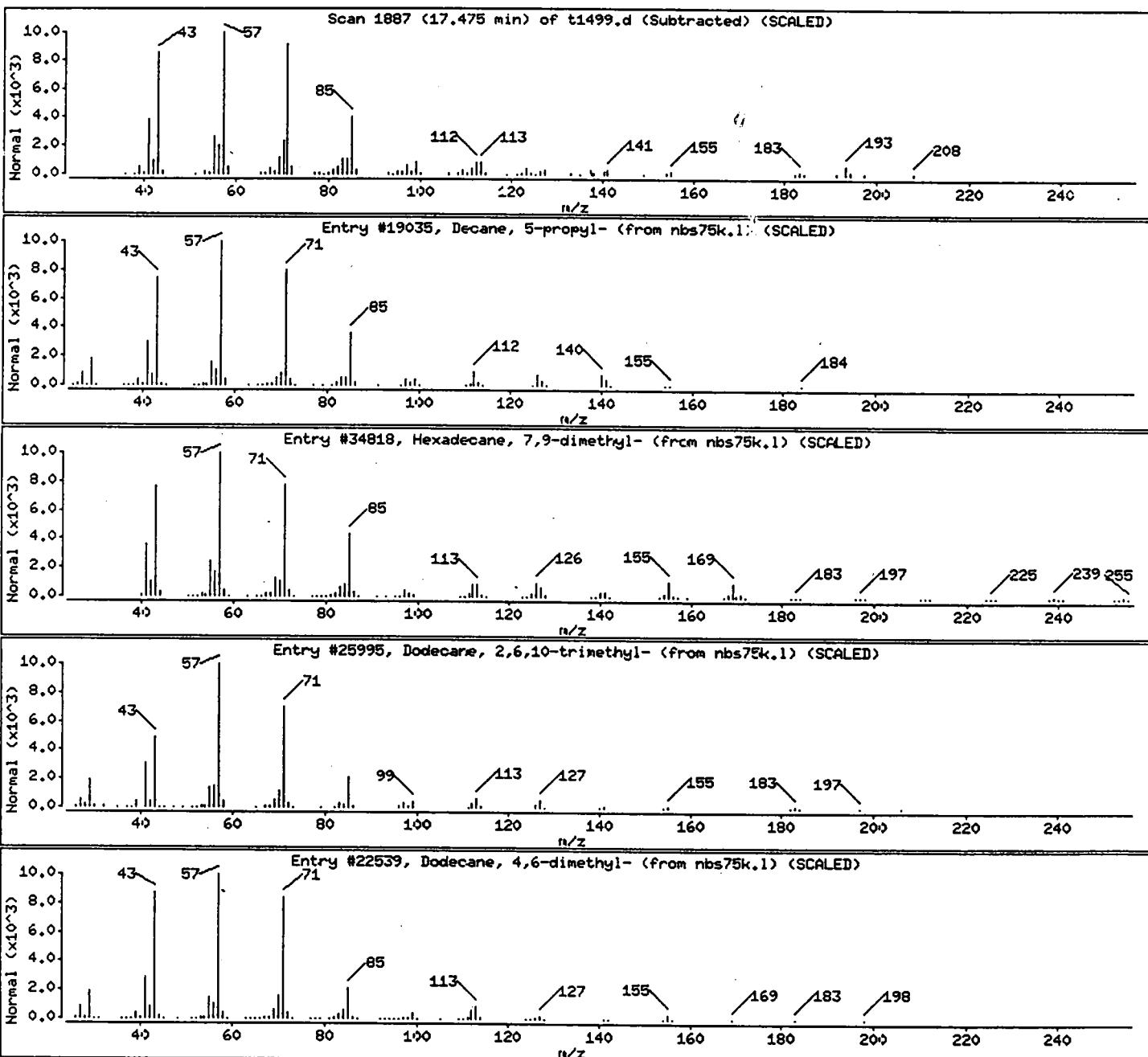
Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Hatch

	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Alkane						
Decane, 5-propyl-	17312-62-8	nbs75k.1	19035	76	C13H28	184
Hexadecane, 7,9-dimethyl-	21164-95-4	nbs75k.1	34818	72	C18H38	254
Dodecane, 2,6,10-trimethyl-	3891-98-3	nbs75k.1	25995	64	C16H32	212
Dodecane, 4,6-dimethyl-	61141-72-8	nbs75k.1	22539	64	C14H30	198



Data File: /chem/BNAHS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAHS3.i

Sample Info: 96866;30;2;2;10.4

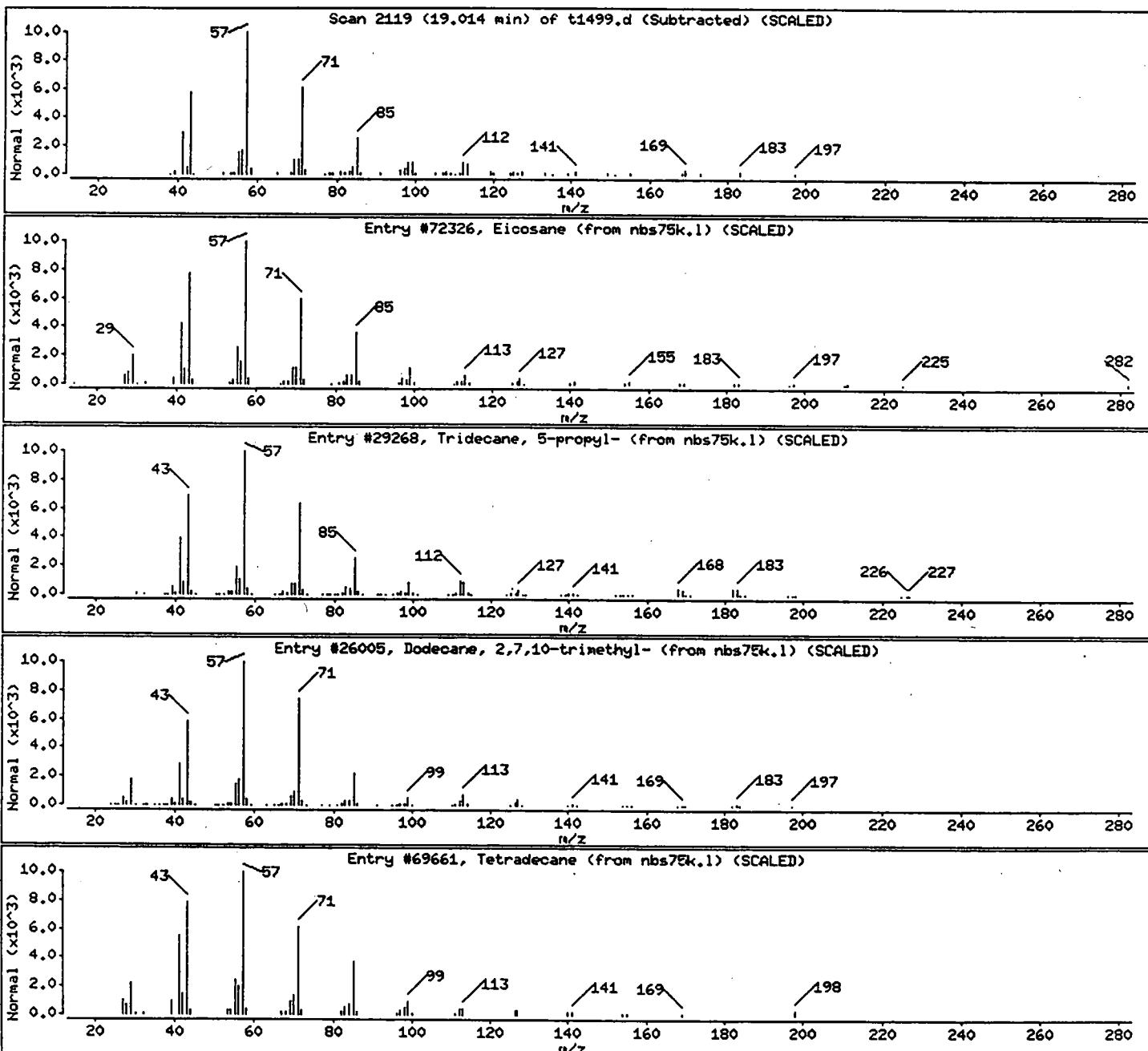
Operator: BNAHS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Hatch

	CAS Number	Library	Entry	Quality	Formula	Weight
Eicosane	112-95-8	nbs75k.1	72326	86	C20H42	282
Tridecane, 5-propyl-	55045-11-9	nbs75k.1	29268	86	C16H34	226
Dodecane, 2,7,10-trimethyl-	74645-98-0	nbs75k.1	26005	78	C15H32	212
Tetradecane	629-59-4	nbs75k.1	69661	78	C14H30	198



Data File: /chem/BNAHS3.i/8270/06-02-97/19jun97A.b/t1499.d

Date : 19-JUN-97 21:29:00

Client ID: PX-1

Instrument: BNAHS3.i

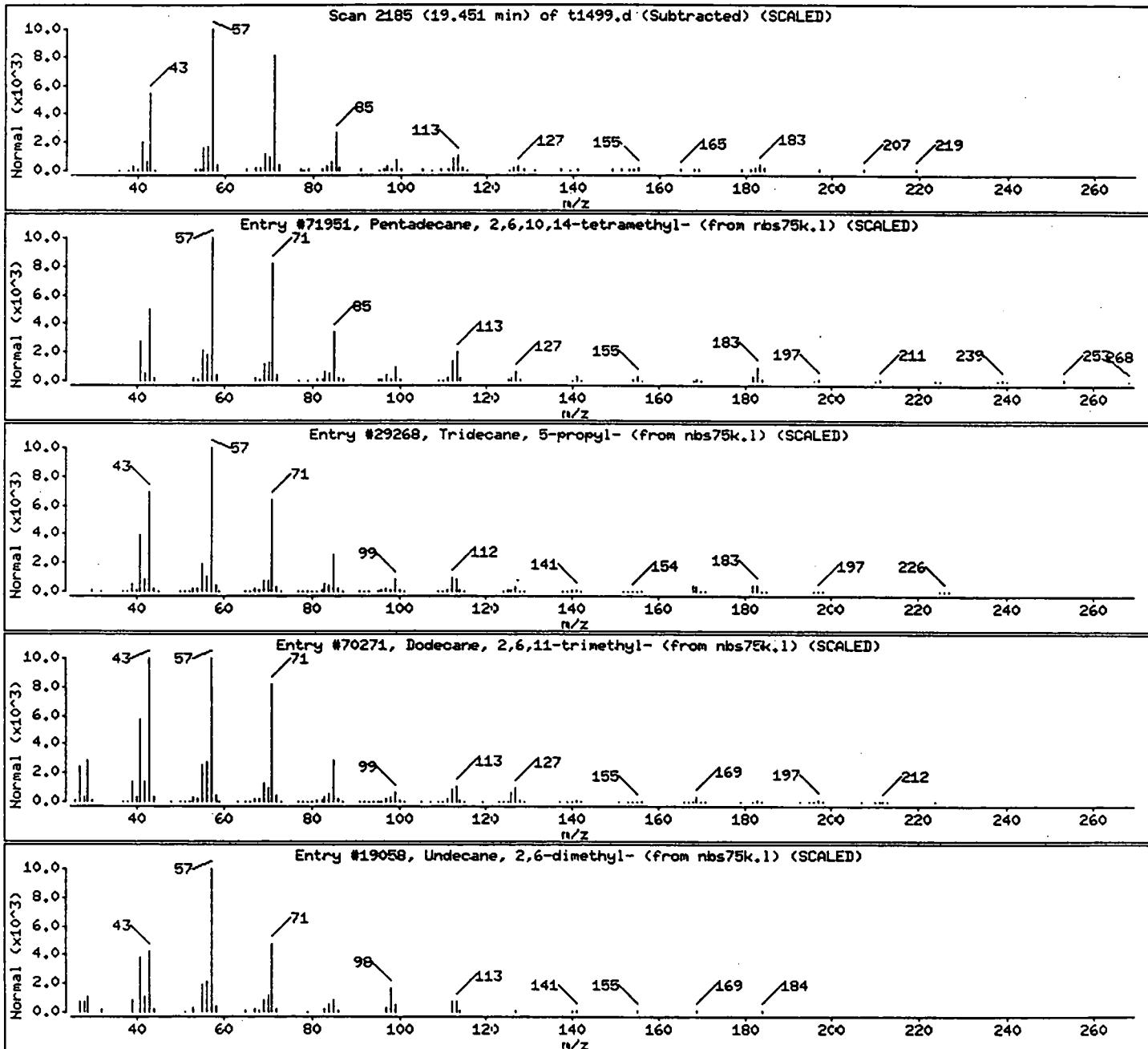
Sample Info: 96866;30;2;2;10.4

Operator: BNAHS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Hatch	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Alkane						
Pentadecane, 2,6,10,14-tetramethyl-	1921-70-6	nbs75k.1	71951	90	C19H40	268
Tridecane, 5-propyl-	55045-11-9	nbs75k.1	29268	90	C16H34	226
Dodecane, 2,6,11-trimethyl-	31295-56-4	nbs75k.1	70271	80	C15H32	212
Undecane, 2,6-dimethyl-	17301-23-4	nbs75k.1	19058	58	C13H28	184



Client ID: PX-2
Site: Ortho Diagnostics

Lab Sample No: 96867
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c3062.d

Matrix: SOIL
Level: HIGH
Sample Weight: 4.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 11

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Chloromethane	ND	140
Bromomethane	ND	140
Vinyl Chloride	ND	140
Chloroethane	ND	140
Methylene Chloride	280 B	140
Acetone	ND	700
Trichlorofluoromethane	ND	140
1,1-Dichloroethene	ND	140
1,1-Dichloroethane	ND	140
trans-1,2-Dichloroethene	ND	140
cis-1,2-Dichloroethene	ND	140
Chloroform	ND	140
1,2-Dichloroethane	ND	140
1,1,1-Trichloroethane	ND	140
Carbon Tetrachloride	ND	140
Bromodichloromethane	ND	140
1,2-Dichloropropane	ND	140
cis-1,3-Dichloropropene	ND	140
Trichloroethene	ND	140
Dibromochloromethane	ND	140
1,1,2-Trichloroethane	ND	140
Benzene	ND	140
trans-1,3-Dichloropropene	ND	140
2-Chloroethyl Vinyl Ether	ND	140
Bromoform	ND	140
Tetrachloroethene	ND	140
1,1,2,2-Tetrachloroethane	ND	140
Toluene	ND	140
Chlorobenzene	ND	140
Ethylbenzene	ND	140
Xylene (Total)	150	140

Client ID: PX-2
Site: Ortho Diagnostics

Lab Sample No: 96867
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c3062.d

Matrix: SOIL
Level: HIGH
Sample Weight: 4.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 11.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. C11H24 Alkane	15.76	2100	
2. Trimethylbenzene isomer	15.95	1900	
3. C10H20 Cycloalkane	16.21	3700	
4. Ethylmethylbenzene isomer	16.43	1500	
5. C11H24 Alkane	16.69	4700	
6. Decahydronaphthalene isomer	16.85	2400	
7. Tetramethylbenzene isomer	17.03	2400	
8. Decahydromethylnaphthalene isomer	17.55	1800	
9. Tetramethylbenzene isomer	17.62	1200	
10. Unknown Alkane	17.84	1300	
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

23000

Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3062.d
Report Date: 13-Jun-97 16:21:20

Envirotech Research Inc.

VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3062.d
Lab Smp Id: 96867 Client Smp ID: PX-2
Inj Date : 13-JUN-97 12:25:00
Operator : VOAMS 3 Inst ID: VOAMS3.i
Smp Info : 96867;50;11.0;4;10
Misc Info : V393;4420;DRL
Comment :
Method : /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/8240b-HIGH.m
Meth Date : 13-Jun-97 09:08:33 Quant Type: ISTD
Cal Date : 24-MAY-97 13:16:00 Cal File: c2694.d
Als bottle: 5
Dil Factor: 50.00000
Integrator: HP RTE
Target Version: 3.20 Compound Sublist: PPVOA+ACETv.sub
Procesing Host: hp735

Concentration Formula: (Vt/Ws)/((100-M)/100)

Name	Value	Description
Vt	10.000	Volume of final extract (mL)
Ws	4.000	Weight of sample extracted (g)
M	11.000	% Moisture (not decanted)

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/L) FINAL (ug/Kg)
6 Methylene Chloride	84	6.786	6.726 (0.756)	56162	2.0	280	
* 2 Bromochloromethane	128	8.977	8.917 (1.000)	966782	50		
\$ 16 1,2-Dichloroethane-d4 (SUR)	65	9.726	9.666 (0.948)	1216805	42	5900	
* 19 1,4-Difluorobenzene	114	10.259	10.200 (1.000)	4055479	50		
\$ 37 Toluene-d8 (SUR)	98	12.118	12.059 (1.181)	3456030	43	6100	
* 32 Chlorobenzene-d5	117	13.848	13.788 (1.000)	2997767	50		
M 45 Xylene (Total)	100			37951	1.1	150	
43 m+p-Xylene	106	14.093	14.019 (1.018)	37951	1.1	150	
\$ 41 Bromofluorobenzene (SUR)	174	15.145	15.085 (1.094)	1345233	43	6100	

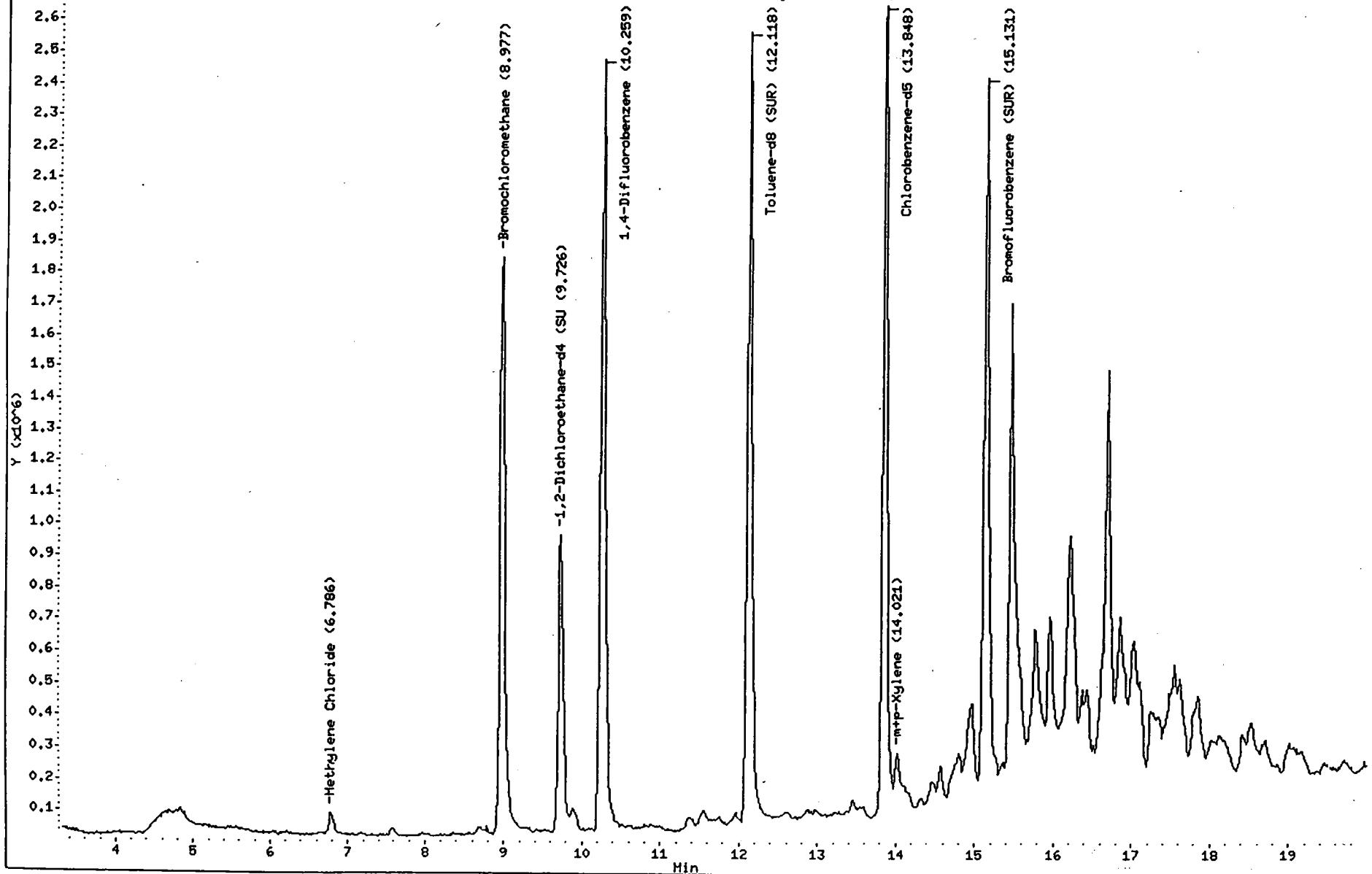
Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/13Jun97.b/c3062.d
Date : 13-JUN-97 12:25:00
Client ID: PX-2
Sample Info: 96867;50;11.0;4;10

Column phase: DB624

Instrument: VOAMS3.i

Operator: VOAMS 3
Column diameter: 0.53

/chem/VOAMS3.i/8240HIGH/05-24-97/13Jun97.b/c3062.d



Data File: /chem/VOAMS3.i/824CHICH/05-24-97/13jun97.b/c3062.d

Date : 13-JUN-97 12:25:00

Client ID: PX-2

Instrument: VOAMS3.i

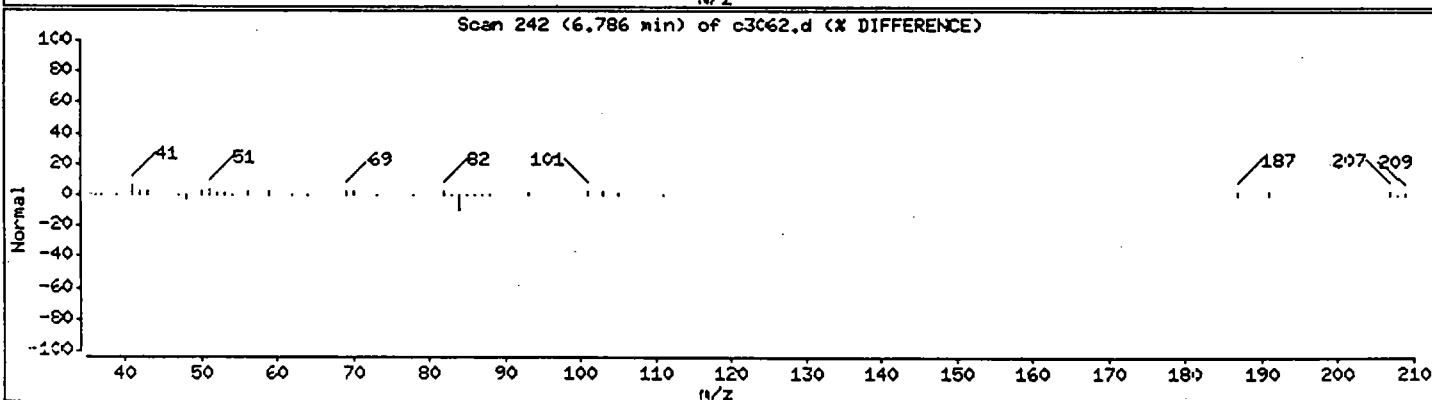
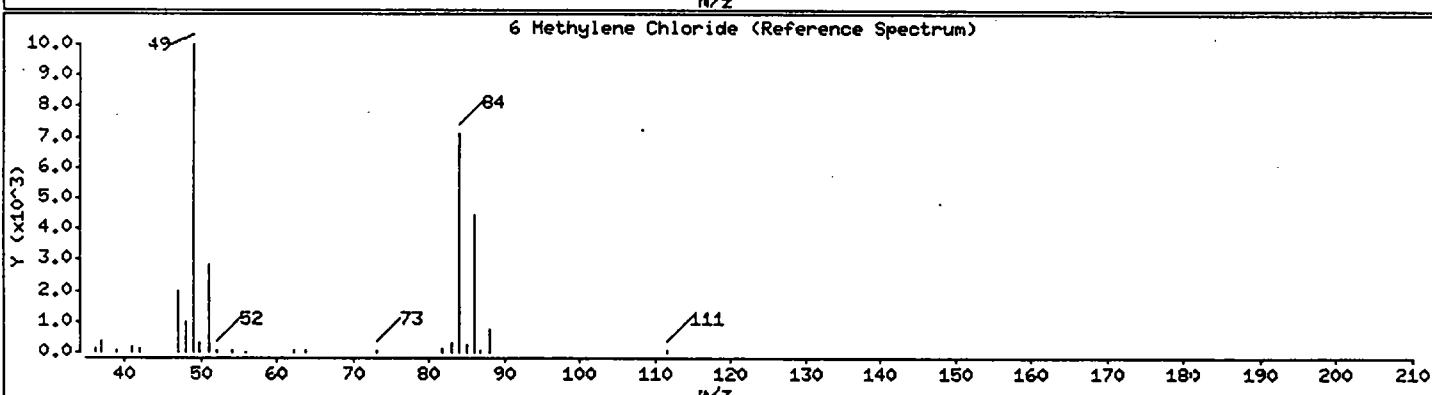
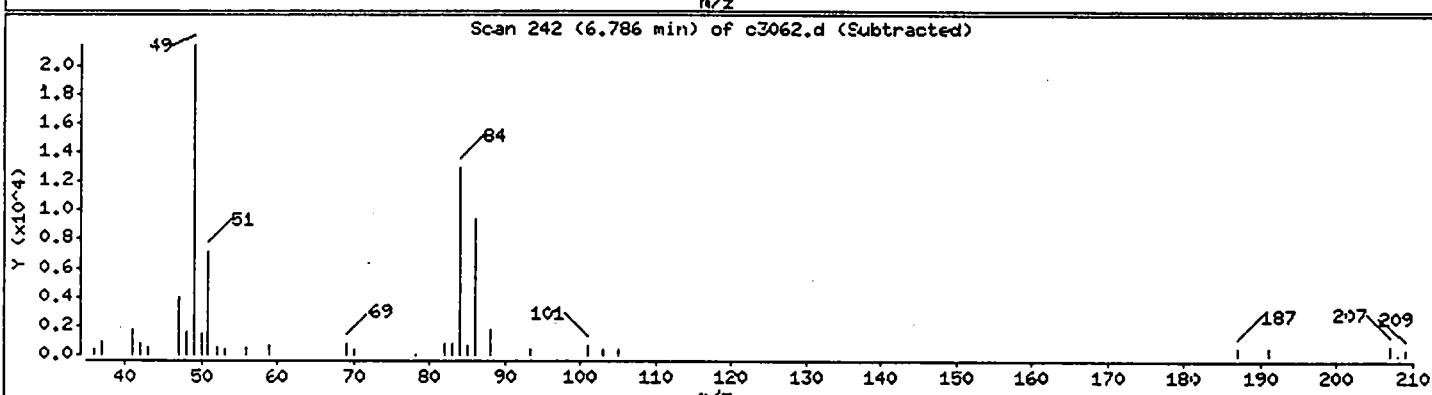
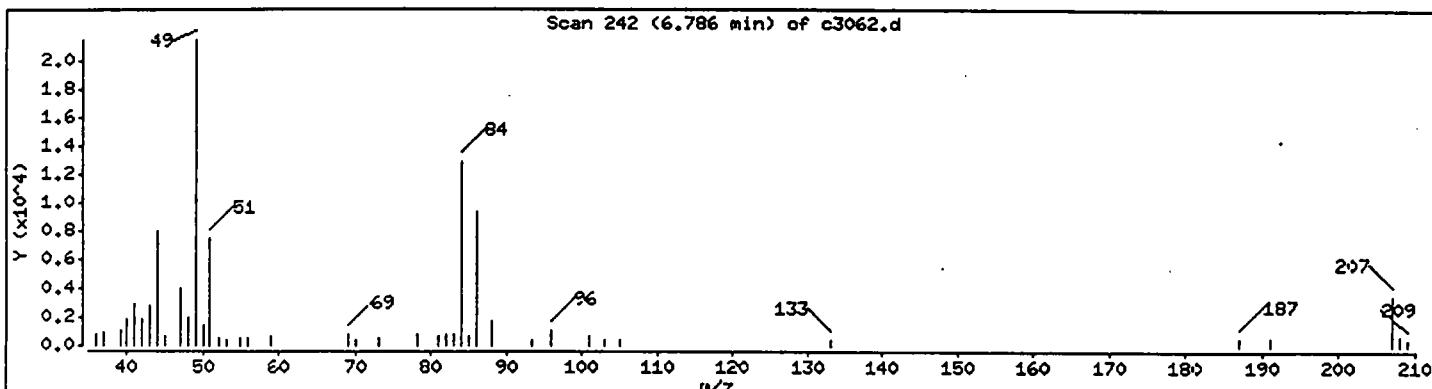
Sample Info: 96867;50;11.0;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

6 Methylene Chloride



Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13jun97.b/c3062.d

Date : 13-JUN-97 12:25:00

Client ID: PX-2

Instrument: VOAMS3.i

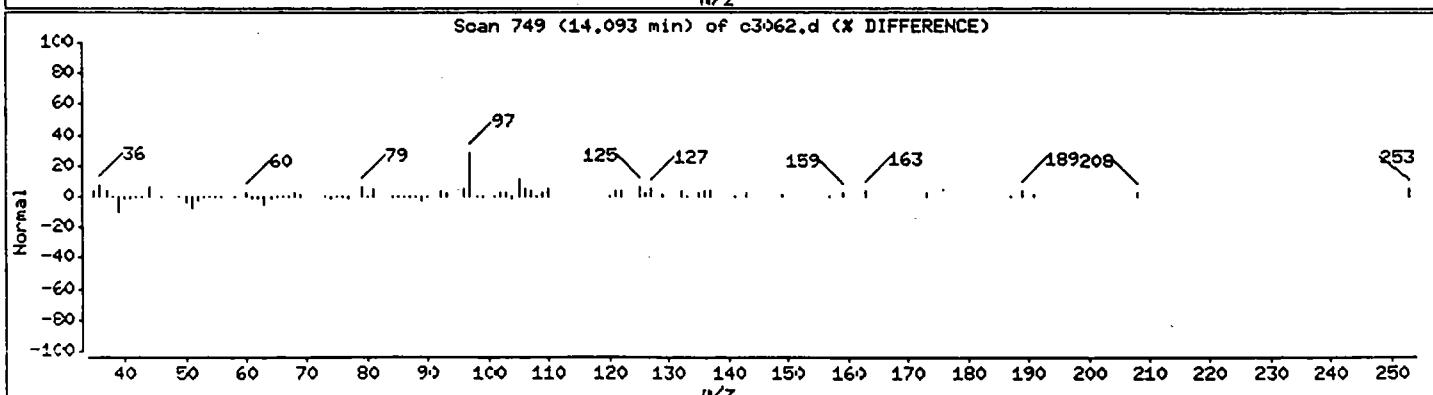
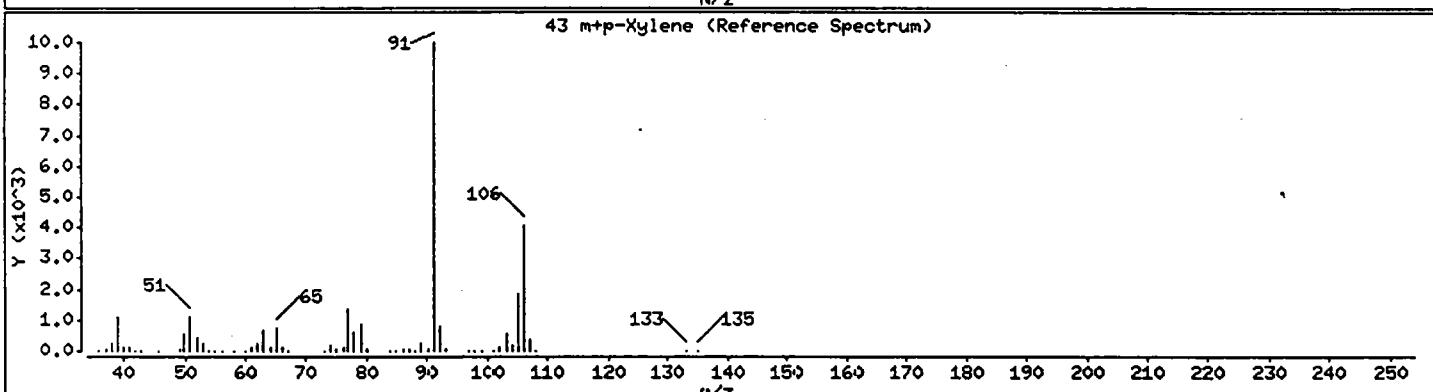
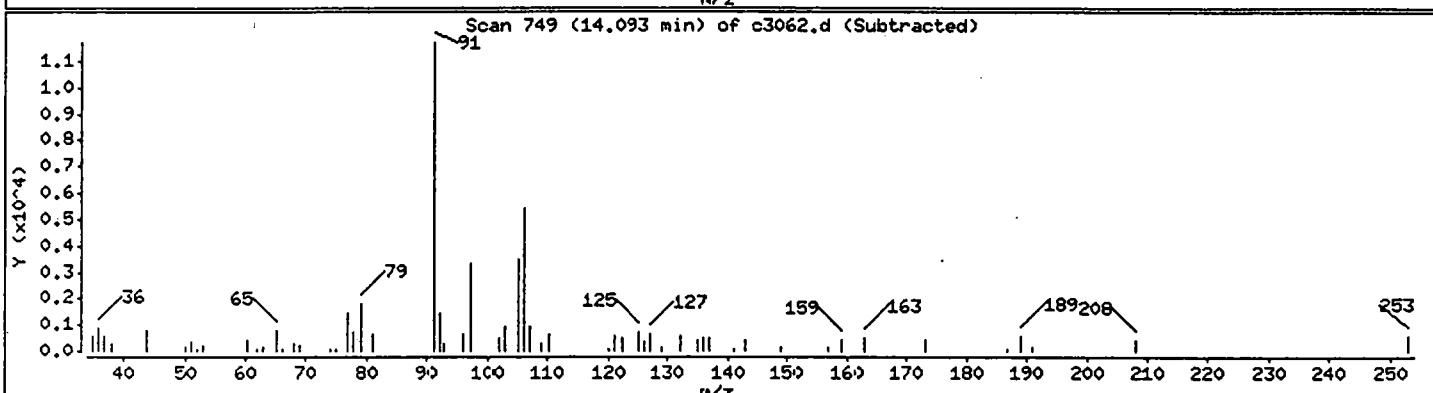
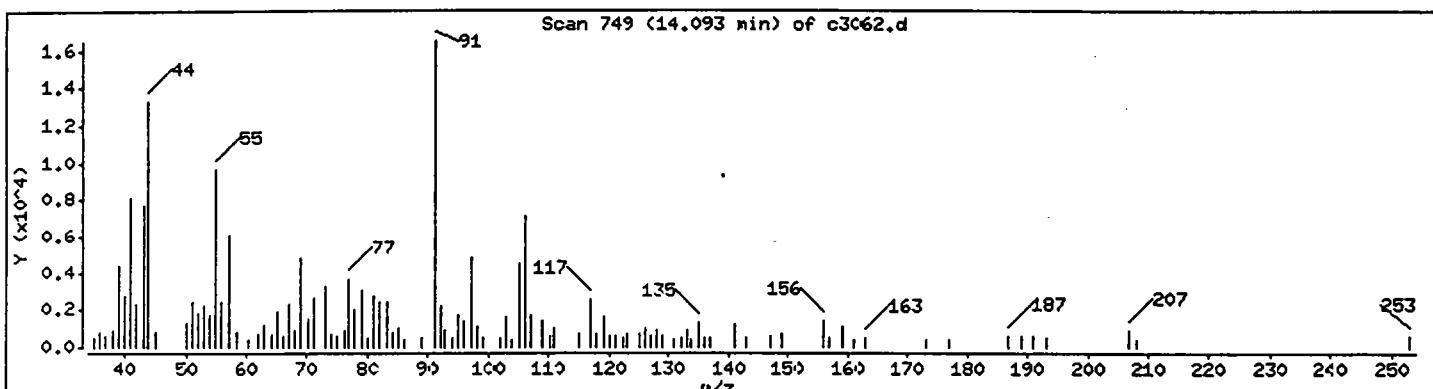
Sample Info: 96867;50;11.0;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: .0.53

43 m+p-Xylene



Data File: /chem/V0AMS3.i/8240HIGH/05-24-97/13jun97.b/c3062.d

Date : 13-JUN-97 12:25:00

Client ID: PX-2

Instrument: V0AMS3.i

Sample Info: 96867;50;11.0;4;10

Operator: V0AMS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

C11H24 Alkane

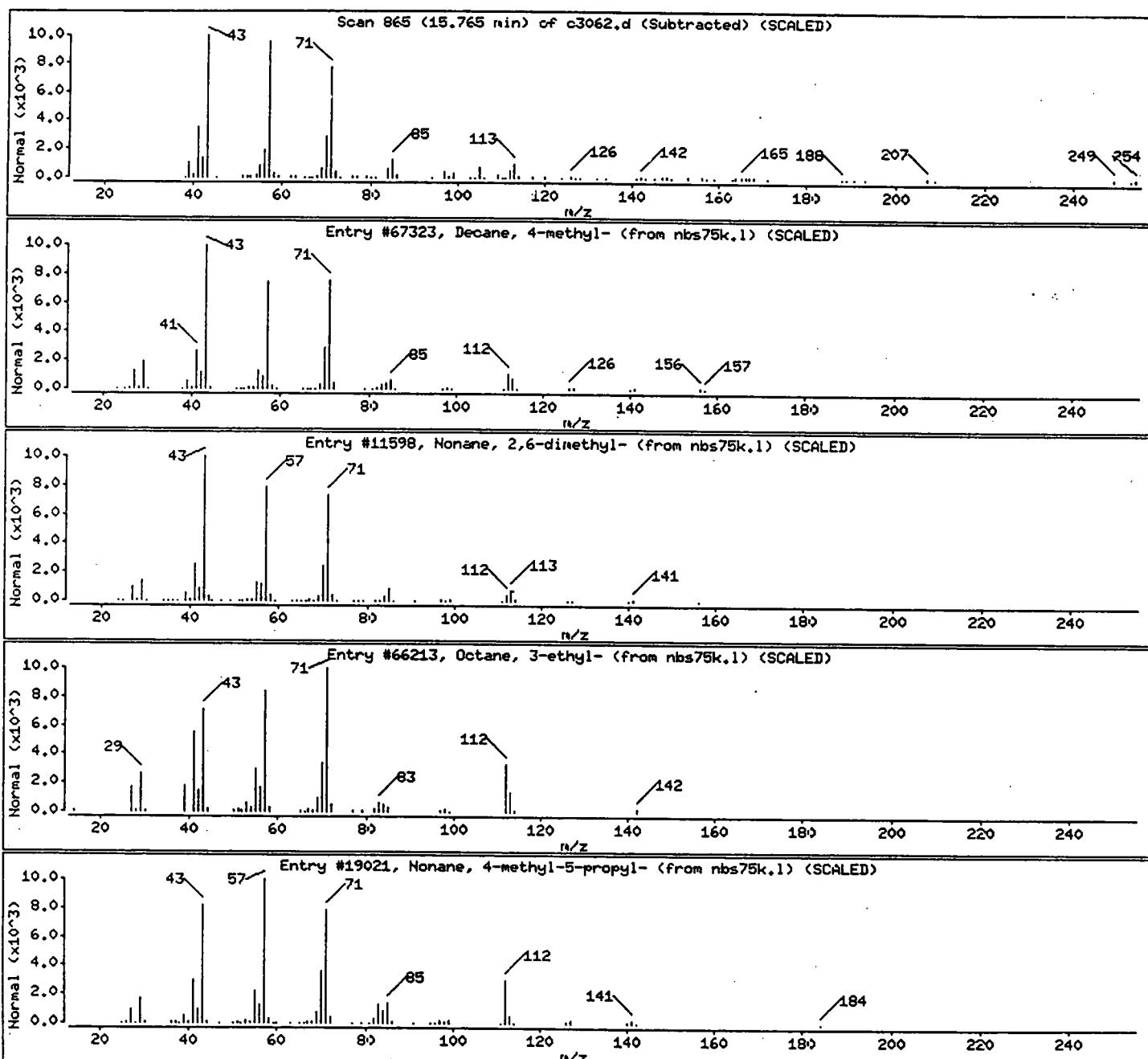
Decane, 4-methyl-

CAS Number	Library	Entry	Quality	Formula	Weight
2847-72-5	nbs75k.1	67323	87	C11H24	156
17302-28-2	nbs75k.1	11599	86	C11H24	156
5881-17-4	nbs75k.1	66213	81	C10H22	142
62185-55-1	nbs75k.1	19021	72	C13H28	184

Nonane, 2,6-dimethyl-

Octane, 3-ethyl-

Nonane, 4-methyl-5-propyl-



Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3062.d

Date : 13-JUN-97 12:25:00

Client ID: PX-2

Instrument: VOAMS3.i

Sample Info: 96867;50;11.0;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

Trimethylbenzene isomer

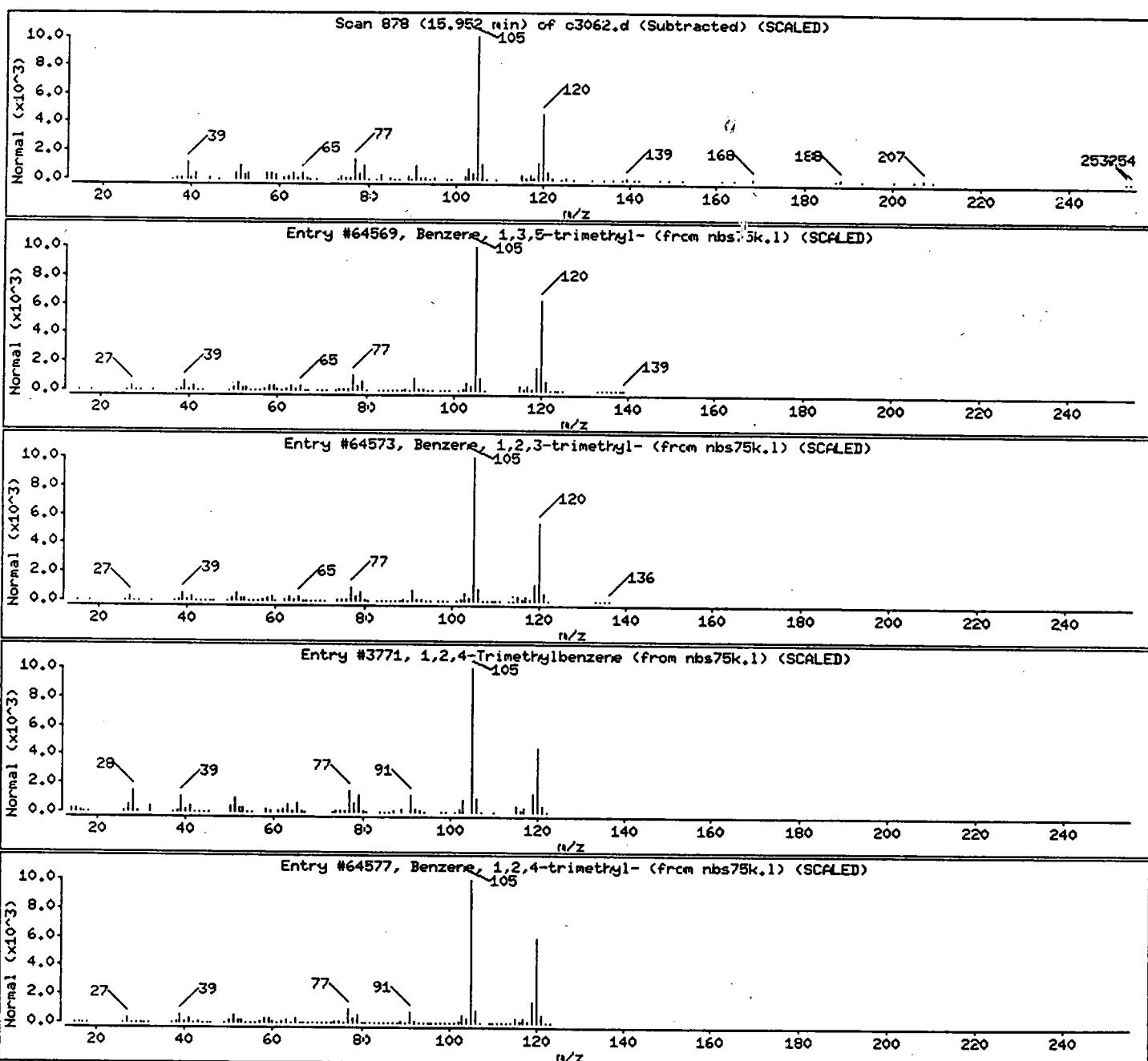
Benzene, 1,3,5-trimethyl-

CAS Number	Library	Entry	Quality	Formula	Weight
108-67-8	nbs75k.1	64569	97	C9H12	120
526-73-8	nbs75k.1	64573	97	C9H12	120
95-36-3	nbs75k.1	3771	96	C9H12	120
95-63-6	nbs75k.1	64577	95	C9H12	120

Benzene, 1,2,3-trimethyl-

1,2,4-Trimethylbenzene

Benzene, 1,2,4-trimethyl-



Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13jun97.b/c3062.d

Date : 13-JUN-97 12:25:00

Client ID: PX-2

Instrument: VOAMS3.i

Sample Info: %6867;50;11.0;4;10

Operator: VOAMS 3

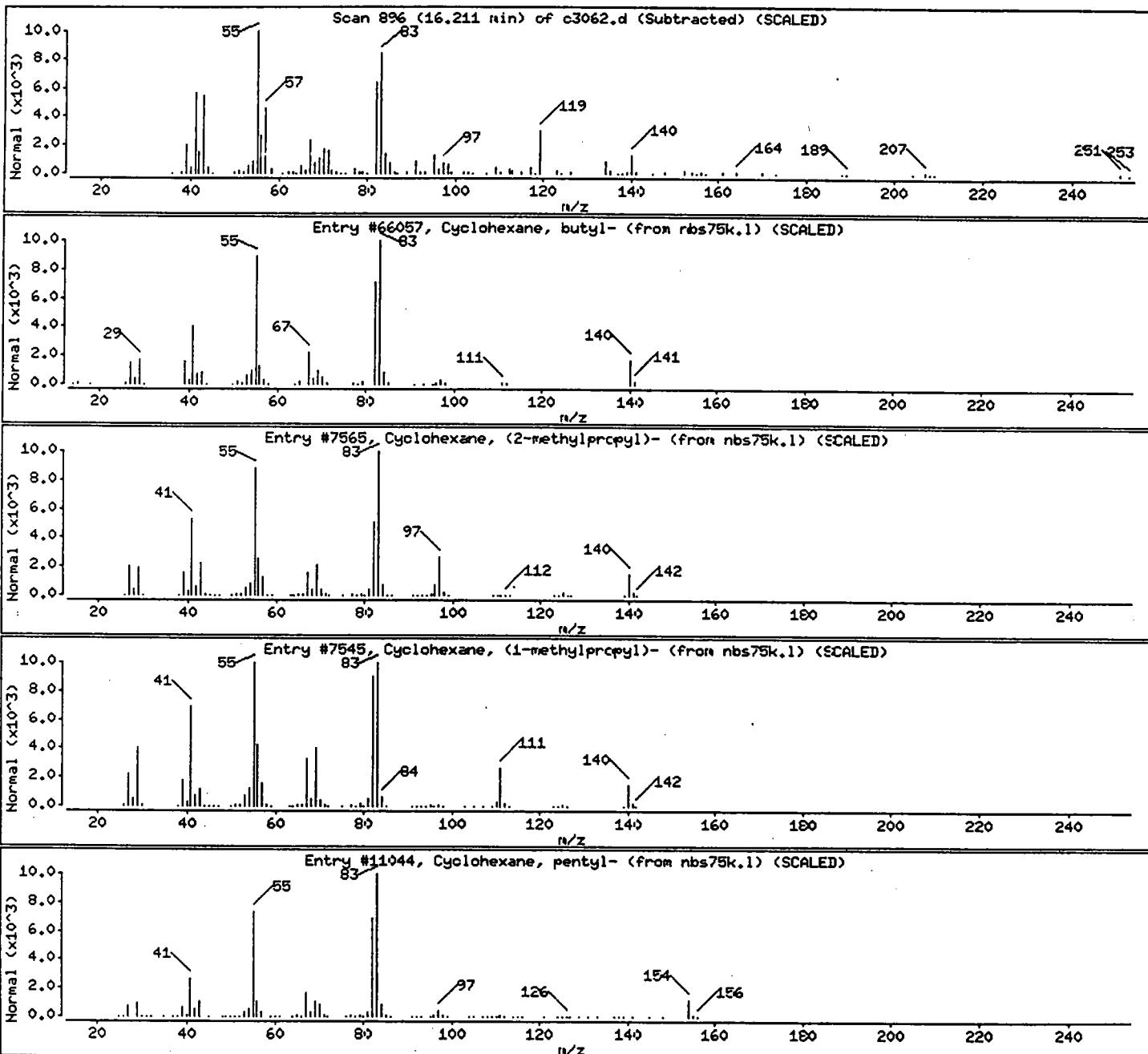
Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

C10H20 Cycloalkane

	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclohexane, butyl-	1678-93-9	nbs75k.1	66057	74	C10H20	140
Cyclohexane, (2-methylpropyl)-	1678-98-4	nbs75k.1	7565	72	C10H20	140
Cyclohexane, (1-methylpropyl)-	7058-01-7	nbs75k.1	7545	64	C10H20	140
Cyclohexane, pentyl-	4292-92-6	nbs75k.1	11044	59	C11H22	154



Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3062.d

Date : 13-JUN-97 12:25:00

Client ID: PX-2

Instrument: VOAMS3.i

Sample Info: 96867;50;11.0;4;10

Operator: VOAMS 3

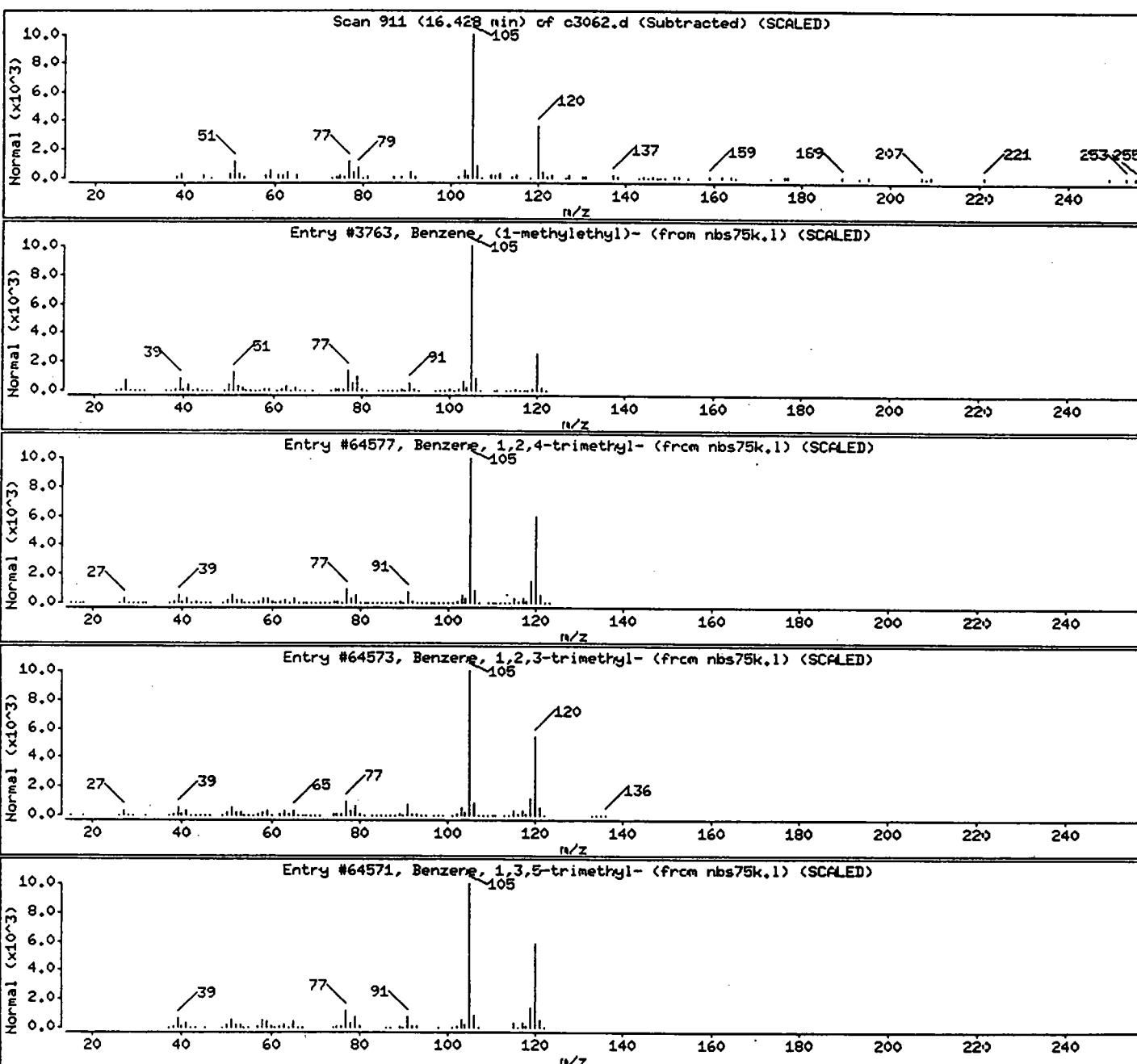
Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

Ethylmethylbenzene isomer

	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, (1-methylethyl)-	98-82-8	nbs75k.1	3763	87	C9H12	120
Benzene, 1,2,4-trimethyl-	95-63-6	nbs75k.1	64577	86	C9H12	120
Benzene, 1,2,3-trimethyl-	526-73-8	nbs75k.1	64573	86	C9H12	120
Benzene, 1,3,5-trimethyl-	108-67-8	nbs75k.1	64571	72	C9H12	120



Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13jun97.b/c3062.d

Date : 13-JUN-97 12:25:00

Client ID: PX-2

Instrument: VOAMS3.i

Sample Info: 96867;50;11.0;4;10

Operator: VOAMS 3

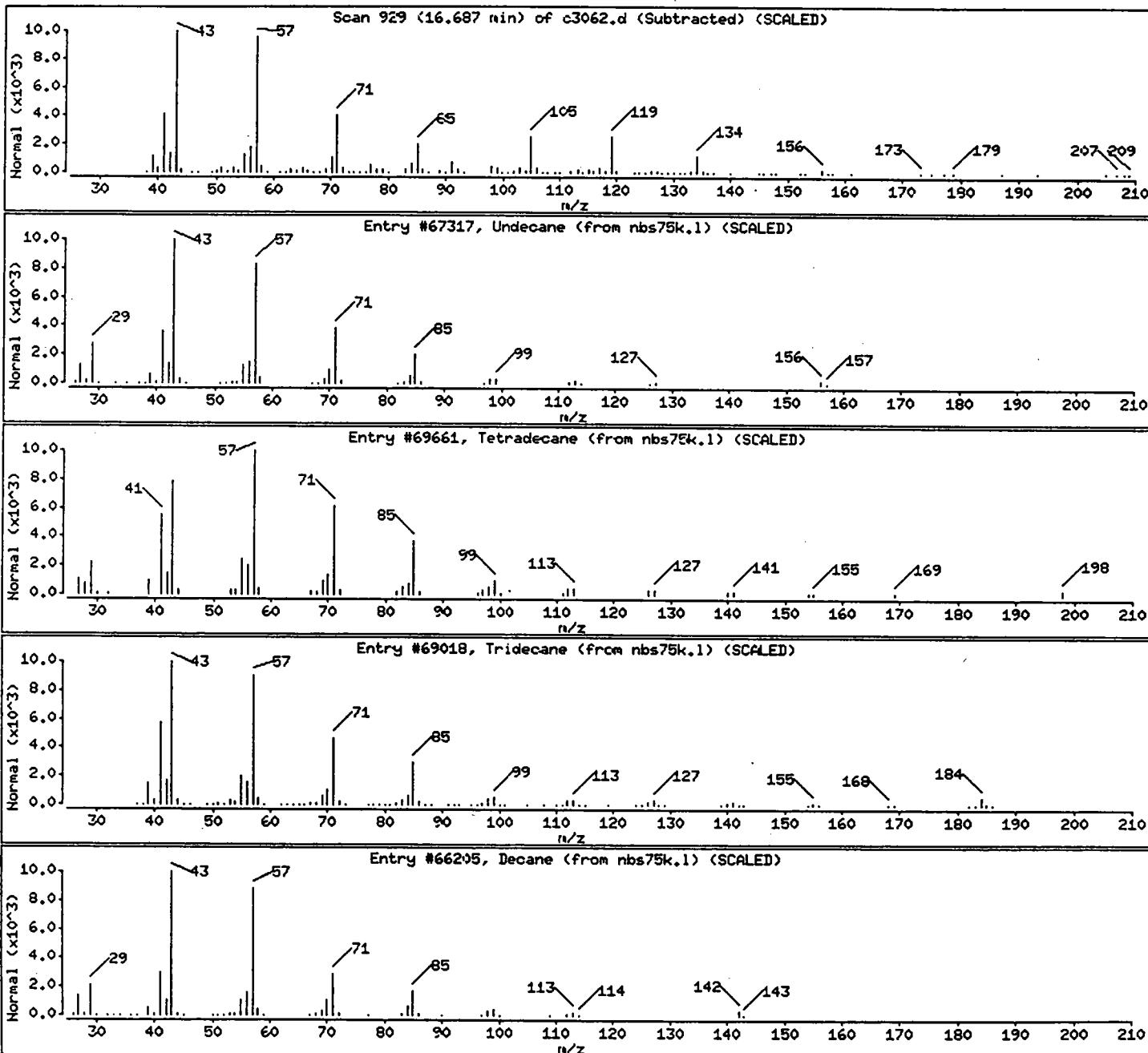
Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

C11H24 Alkane

	CAS Number	Library	Entry	Quality	Formula	Weight
Undecane	1120-21-4	nbs75k.1	67317	93	C11H24	156
Tetradecane	629-59-4	nbs75k.1	69661	52	C14H30	198
Tridecane	629-50-5	nbs75k.1	69018	52	C13H28	184
Decane	124-18-5	nbs75k.1	66205	52	C10H22	142



Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3062.d

Date : 13-JUN-97 12:25:00

Client ID: PX-2

Instrument: VOAMS3.i

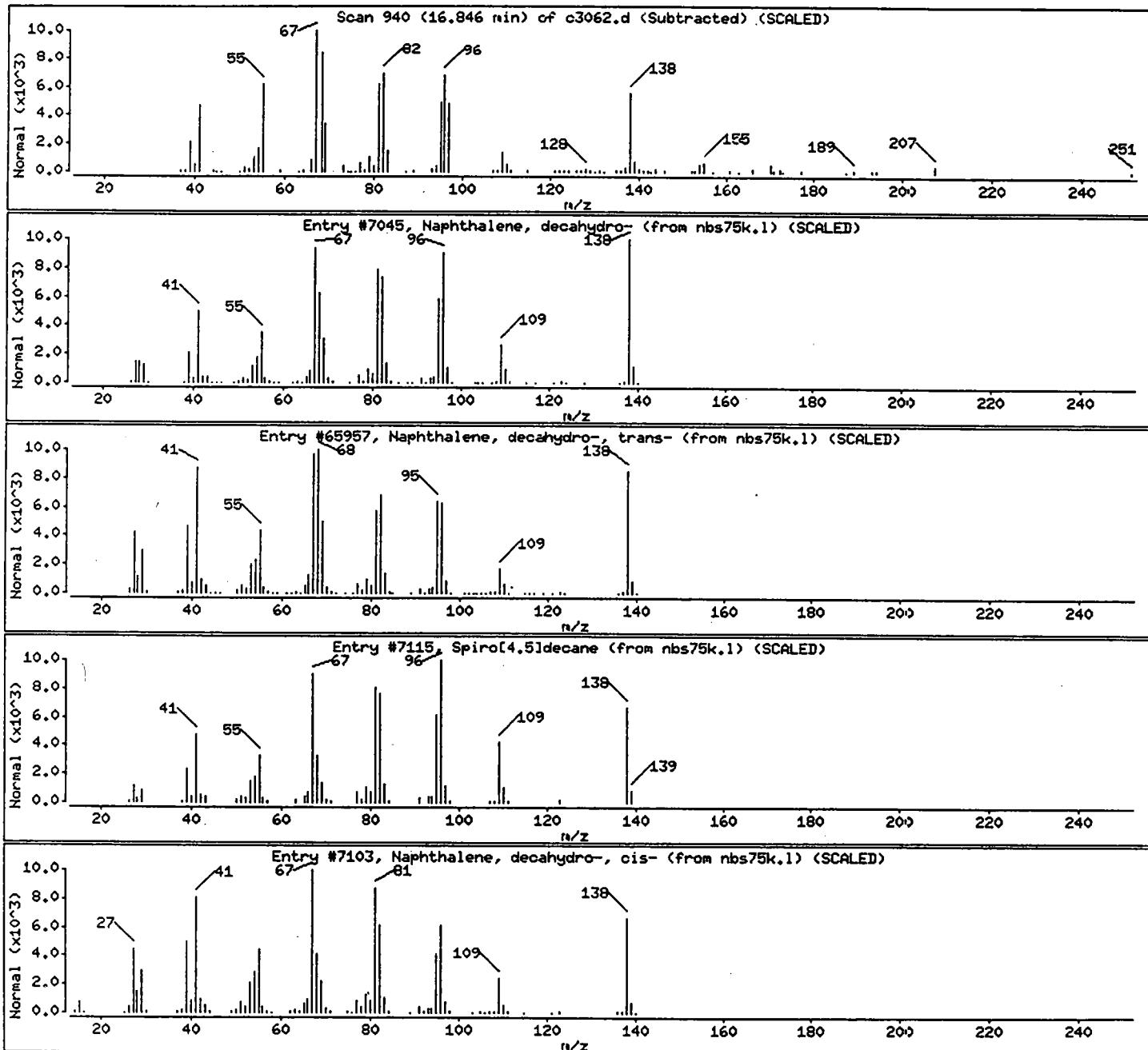
Sample Info: 96867;50;11.0;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Decahydronaphthalene isomer						
Naphthalene, decahydro-	91-17-8	nbs75k.1	7045	95	C10H18	138
Naphthalene, decahydro-, trans-	493-02-7	nbs75k.1	65957	93	C10H18	138
Spiro[4.5]decane	176-63-6	nbs75k.1	7115	86	C10H18	138
Naphthalene, decahydro-, cis-	493-01-6	nbs75k.1	7103	58	C10H18	138



Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13jun97.b/c3062.d

Date : 13-JUN-97 12:25:00

Client ID: PX-2

Instrument: VOAMS3.i

Sample Info: 96867;50;11.0;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

Tetramethylbenzene isomer

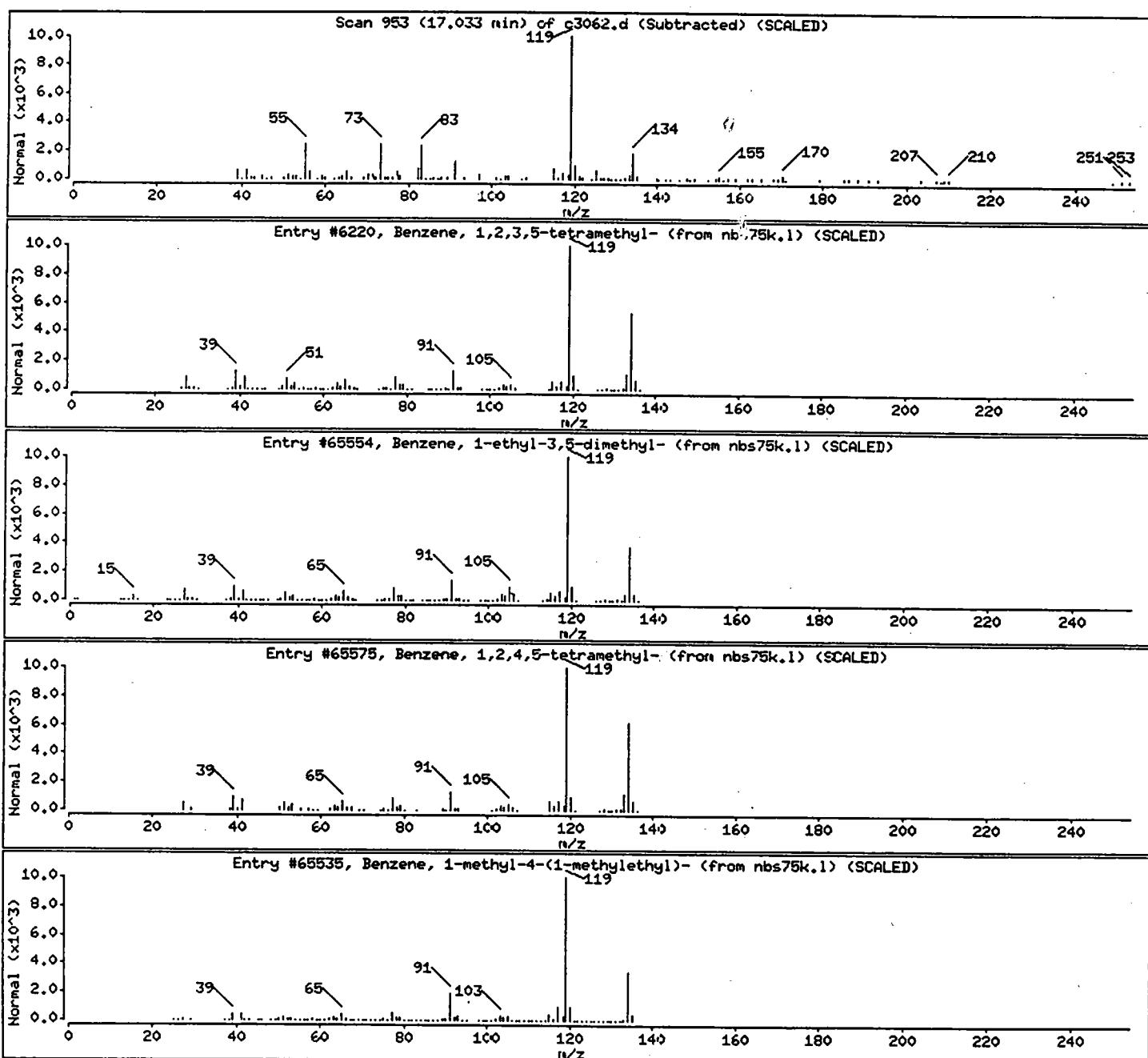
Benzene, 1,2,3,5-tetramethyl-

CAS Number	Library	Entry	Quality	Formula	Weight
527-53-7	nbs75k.1	6220	64	C10H14	134
934-74-7	nbs75k.1	65554	58	C10H14	134
95-93-2	nbs75k.1	65575	58	C10H14	134
99-87-6	nbs75k.1	65535	53	C10H14	134

Benzene, 1-ethyl-3,5-dimethyl-

Benzene, 1,2,4,5-tetramethyl-

Benzene, 1-methyl-4-(1-methylethyl)-



Data File: /chem/VOAMS3.i /924CHICH/05-24-97/13jun97.b/c3062.d

Date : 13-JUN-97 12:25:00

Client ID: PX-2

Instrument: VOAMS3.i

Sample Info: 96867;50;11.0;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

Decahydromethylnaphthalene isomer

CAS Number

Library

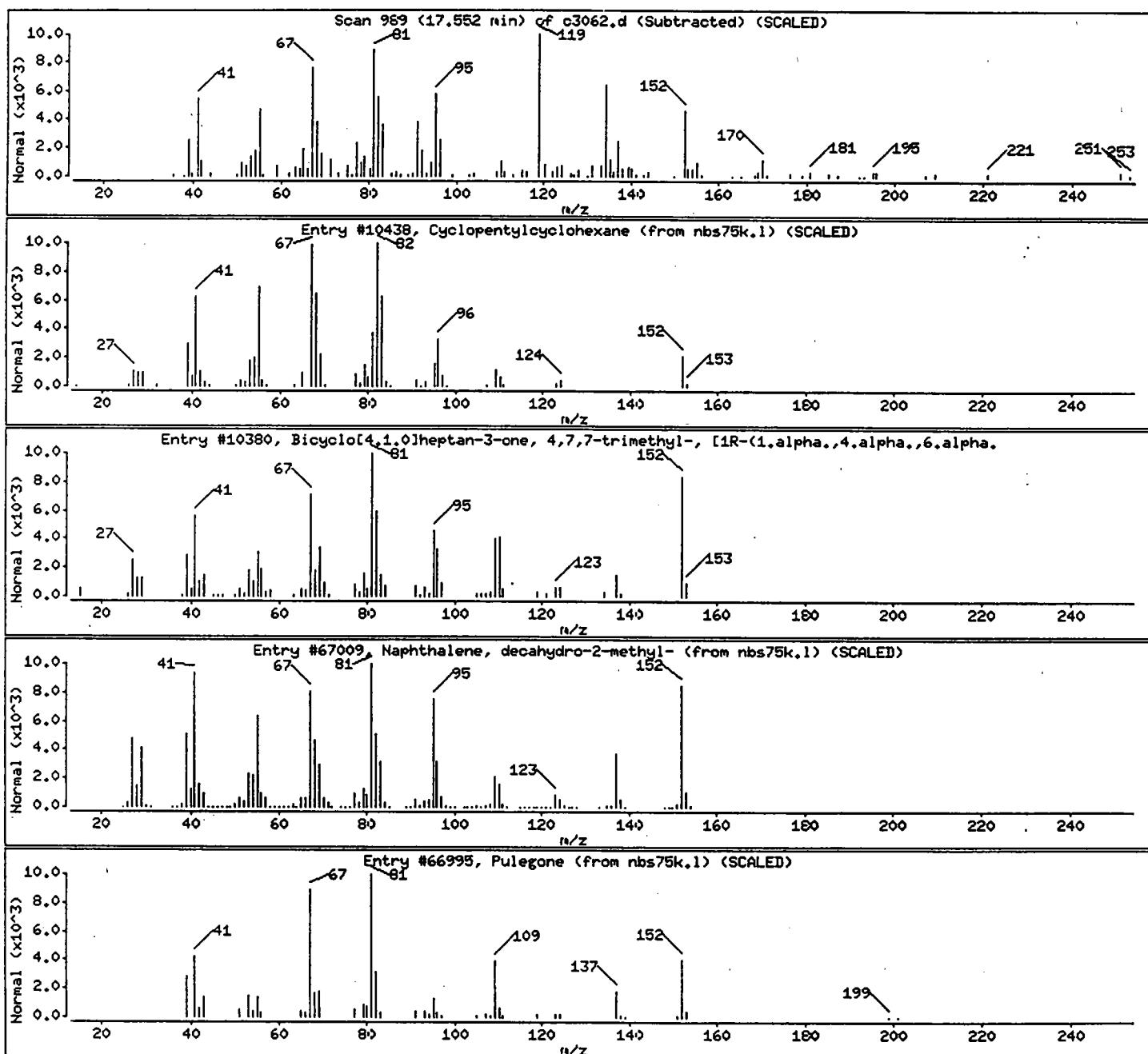
Entry

Quality

Formula

Weight

Cyclopentylcyclohexane	1606-08-2	nbs75k.1	10438	55	C11H20	152
Bicyclo[4.1.0]heptan-3-one, 4,7,7-trimethyl-	4176-04-9	nbs75k.1	10380	49	C10H16O	152
Naphthalene, dehydro-2-methyl-	2958-76-1	nbs75k.1	67009	43	C11H20	152
Pulegone	89-82-7	nbs75k.1	66995	43	C10H16O	152



Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3062.d

Date : 13-JUN-97 12:25:00

Client ID: PX-2

Instrument: VOAMS3.i

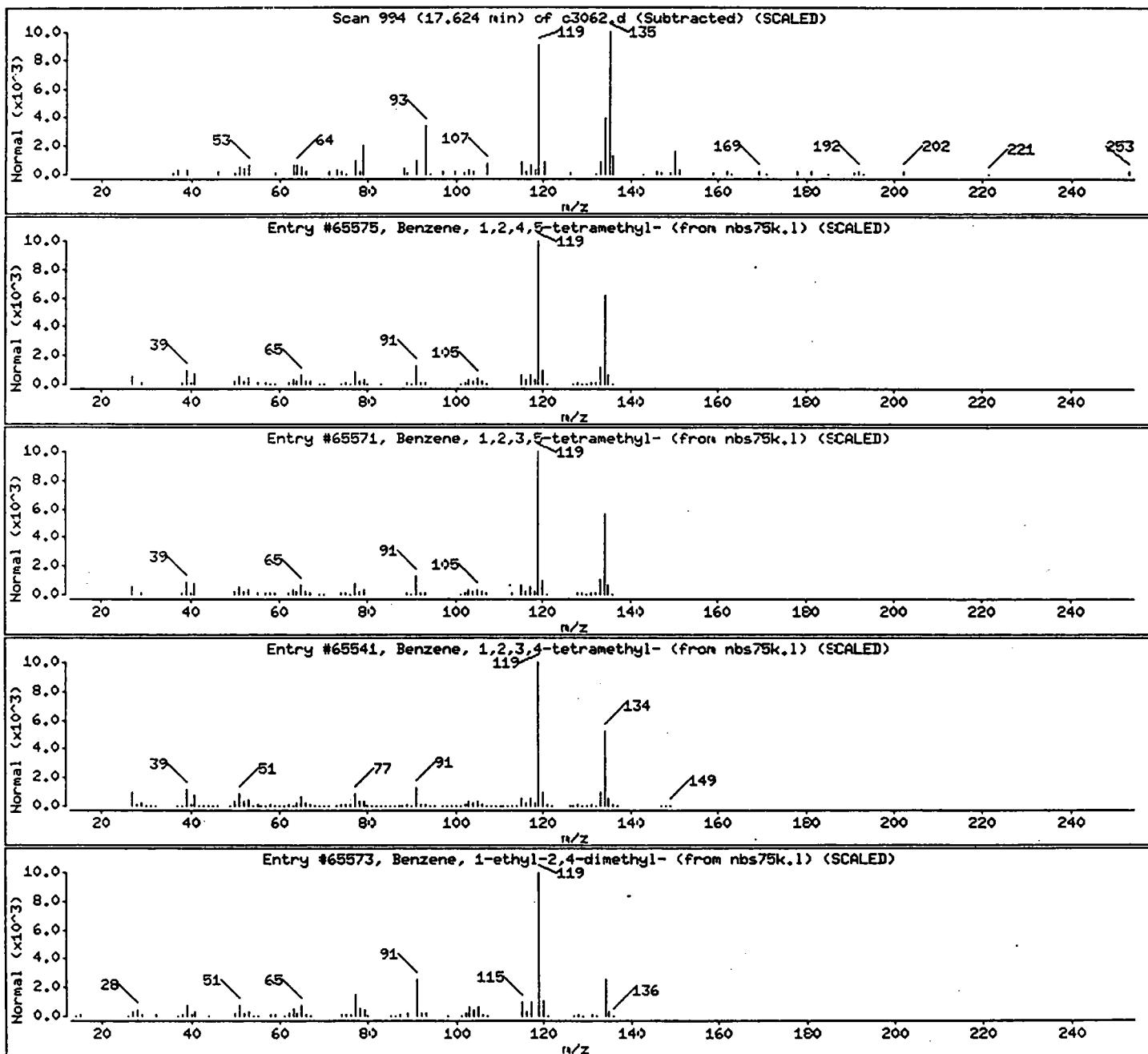
Sample Info: 96867;50;11.0;4;10

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Tetramethylbenzene isomer						
Benzene, 1,2,4,5-tetramethyl-	95-93-2	nbs75k.1	65575	50	C10H14	134
Benzene, 1,2,3,5-tetramethyl-	527-53-7	nbs75k.1	65571	50	C10H14	134
Benzene, 1,2,3,4-tetramethyl-	488-23-3	nbs75k.1	65541	50	C10H14	134
Benzene, 1-ethyl-2,4-dimethyl-	874-41-9	nbs75k.1	65573	46	C10H14	134



Data File: /chem/V0AHS3.i/8240HIGH/05-24-97/13.jun97.b/c3062.d

Date : 13-JUN-97 12:25:00

Client ID: PX-2

Instrument: V0AHS3.i

Sample Info: 96867;50;11.0;4;10

Operator: V0AHS 3

Column phase: DB624

Column diameter: 0.53

Library Search Compound Hatch

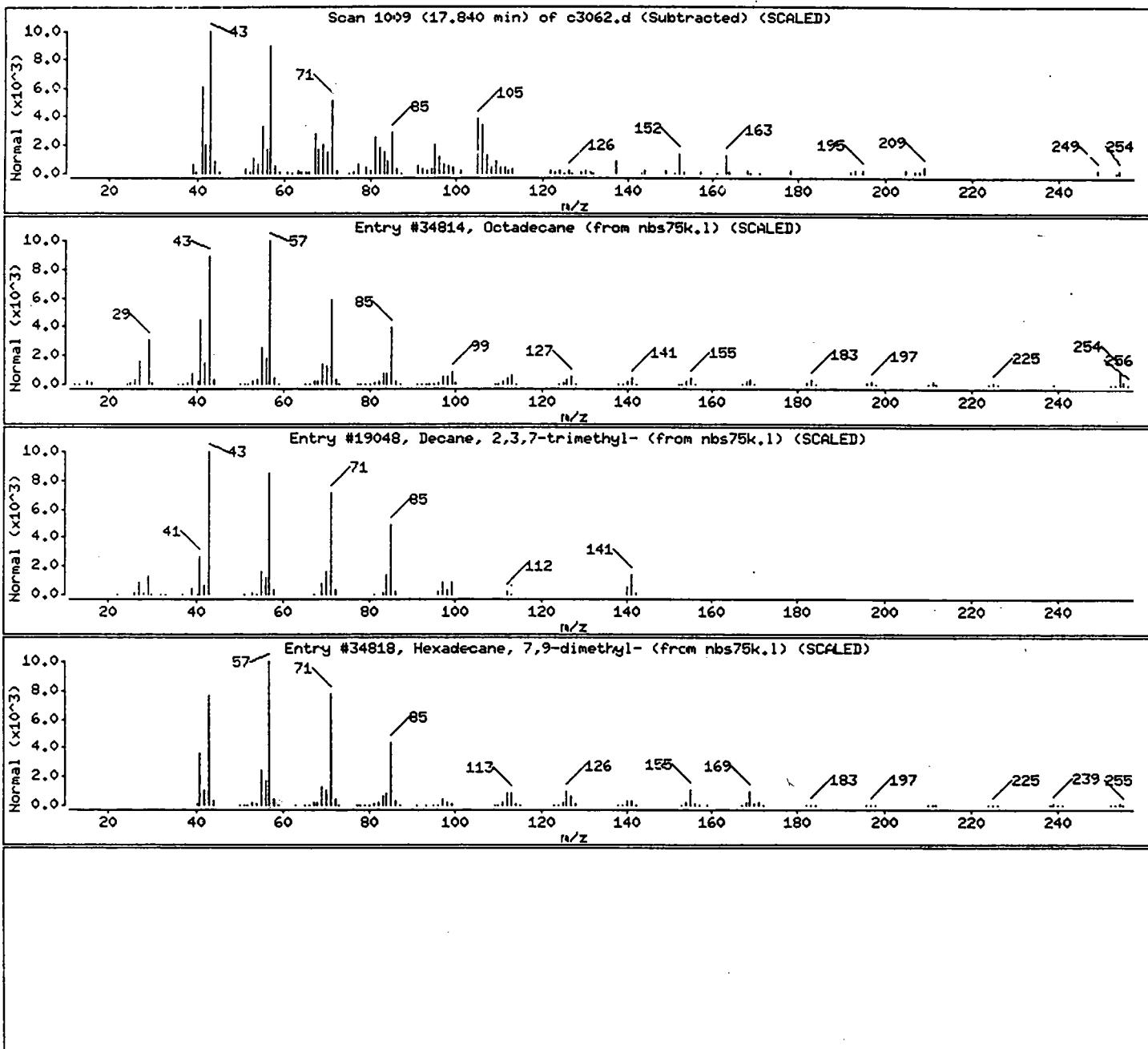
Library	Entry	Quality	Formula	Weight
nbs75k.1	34814	35	C18H38	254
nbs75k.1	19048	22	C13H28	194
nbs75k.1	34818	20	C18H38	254

Unknown Alkane

Octadecane

Decane, 2,3,7-trimethyl-

Hexadecane, 7,9-dimethyl-



Client ID: PX-3
Site: Ortho Diagnostics

Lab Sample No: 96868
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9459.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 10

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
Chloromethane	ND	1.1
Bromomethane	ND	1.1
Vinyl Chloride	ND	1.1
Chloroethane	ND	1.1
Methylene Chloride	22	1.1
Acetone	18	5.6
Trichlorofluoromethane	ND	1.1
1,1-Dichloroethene	ND	1.1
1,1-Dichloroethane	ND	1.1
trans-1,2-Dichloroethene	ND	1.1
cis-1,2-Dichloroethene	ND	1.1
Chloroform	ND	1.1
1,2-Dichloroethane	ND	1.1
1,1,1-Trichloroethane	ND	1.1
Carbon Tetrachloride	ND	1.1
Bromodichloromethane	ND	1.1
1,2-Dichloropropane	ND	1.1
cis-1,3-Dichloropropene	ND	1.1
Trichloroethene	ND	1.1
Dibromochloromethane	ND	1.1
1,1,2-Trichloroethane	ND	1.1
Benzene	0.8J	1.1
trans-1,3-Dichloropropene	ND	1.1
2-Chloroethyl Vinyl Ether	ND	1.1
Bromoform	ND	1.1
Tetrachloroethene	ND	1.1
1,1,2,2-Tetrachloroethane	ND	1.1
Toluene	ND	1.1
Chlorobenzene	ND	1.1
Ethylbenzene	ND	1.1
Xylene (Total)	ND	1.1

Client ID: PX-3
Site: Ortho Diagnostics

Lab Sample No: 96868
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9459.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 10.3

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Ethane, 1,1,2-trichloro-1,2,2-trifluor	6.01	20	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

20

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9459.d
Report Date: 13-Jun-97 15:03:21

Envirotech Research Inc.

VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9459.d
Lab Smp Id: 96868 Client Smp ID: PX-3
Inj Date : 13-JUN-97 11:19:00
Operator : VOAMS 5 Inst ID: VOAMS1.i
Smp Info : 96868;;10.3;5;5
Misc Info : V393;4418;B26;CN
Comment :
Method : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/IFF8240.m
Meth Date : 13-Jun-97 09:56:07 Quant Type: ISTD
Cal Date : 06-JUN-97 13:06:00 Cal File: a9409.d
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PP_ACE.sub
Target Version: 3.20
Procesing Host: hp735

Concentration Formula: ((Vt/Ws) / ((100 - M)/100))

Name	Value	Description
Vt	5.000	Volume of final extract (mL)
Ws	5.000	Weight of sample extracted (g)
M	10.300	% Moisture (not decanted)

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/L)	FINAL (ug/Kg)
6 Methylene Chloride	84	6.736	6.706 (0.751)	660897	20	22		
* 2 Bromochloromethane	128	8.968	8.923 (1.000)	781827	50			
\$ 16 1,2-Dichloroethane-d4 (SUR)	65	9.721	9.677 (0.947)	1250919	51	56		
28 Benzene	78	9.840	9.795 (0.958)	63462	0.72	0.80(a)		
* 19 1/4-Difluorobenzene	114	10.268	10.224 (1.000)	3631954	50			
\$ 37 Toluene-d8 (SUR)	98	12.130	12.086 (1.181)	3798845	48	54		
* 32 Chlorobenzene-d5	117	13.830	13.756 (1.000)	2618997	50			
\$ 41 Bromofluorobenzene (SUR)	174	15.101	15.042 (1.092)	1054070	46	52		
7 Acetone	43	6.071	6.085 (0.677)	114972	16	18		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9459.d

Date : 13-JUN-97 11:19:00

Client ID: PX-3

Sample Info: 96868;;10.3;5;5

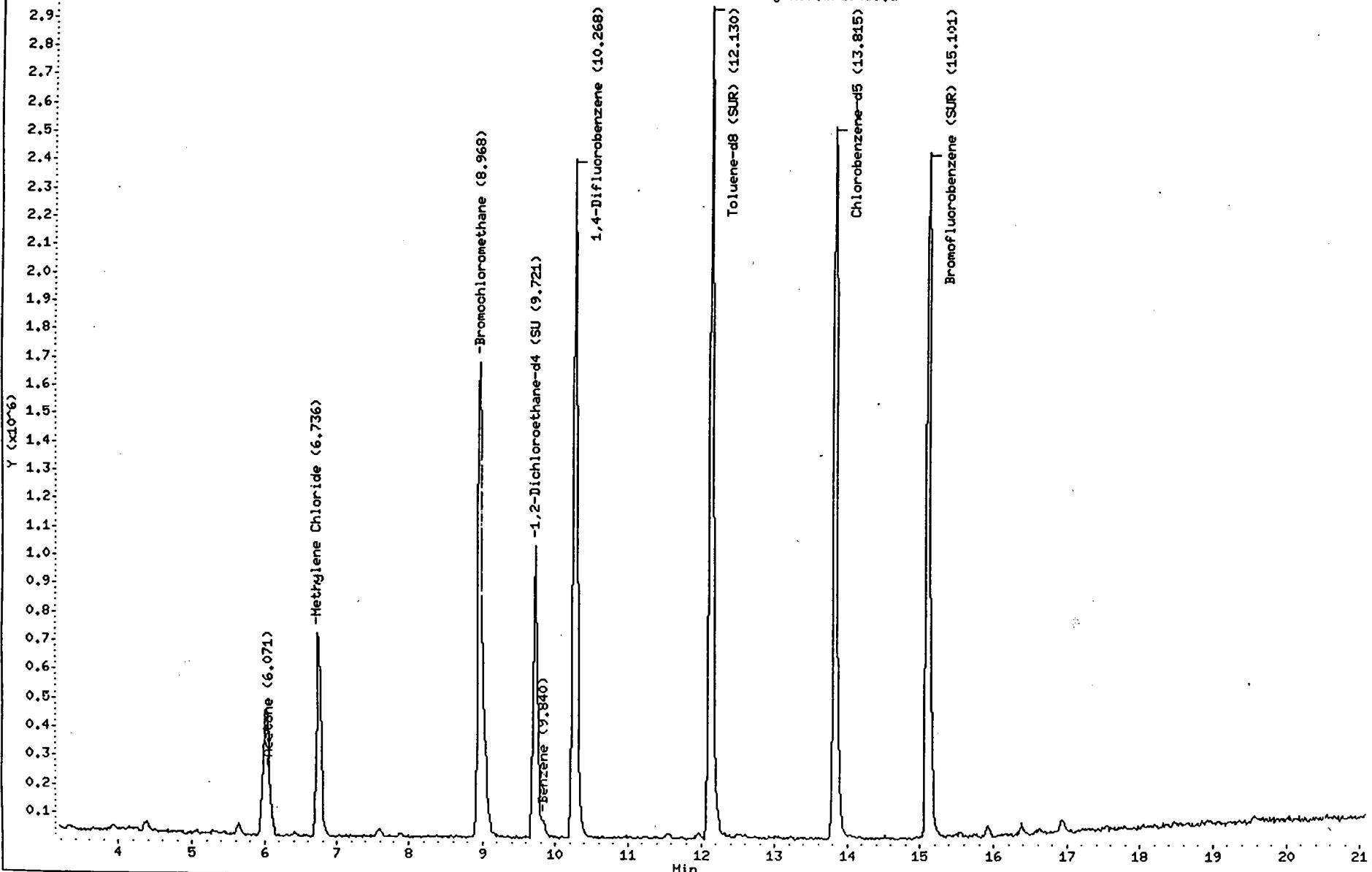
Column phase: DB624

Instrument: VOAMS1.i

Operator: VOAMS 5

Column diameter: 0.53

/chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9459.d



Data File: /chem/VOAMS1.i/824CLOW/06-C6-97/13jun97.b/a9459.d

Date : 13-JUN-97 11:19:00

Client ID: PX-3

Instrument: VOAMS1.i

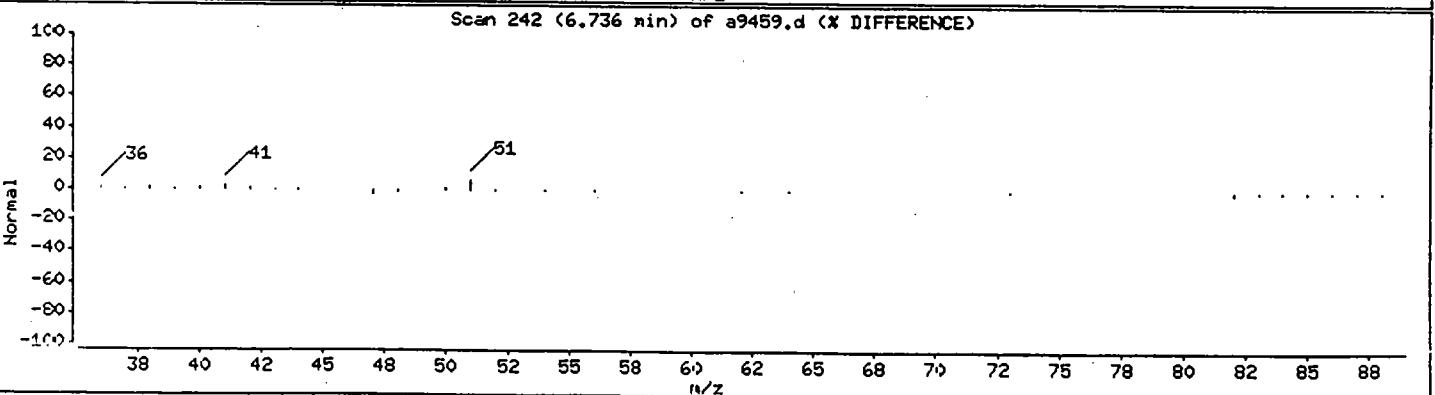
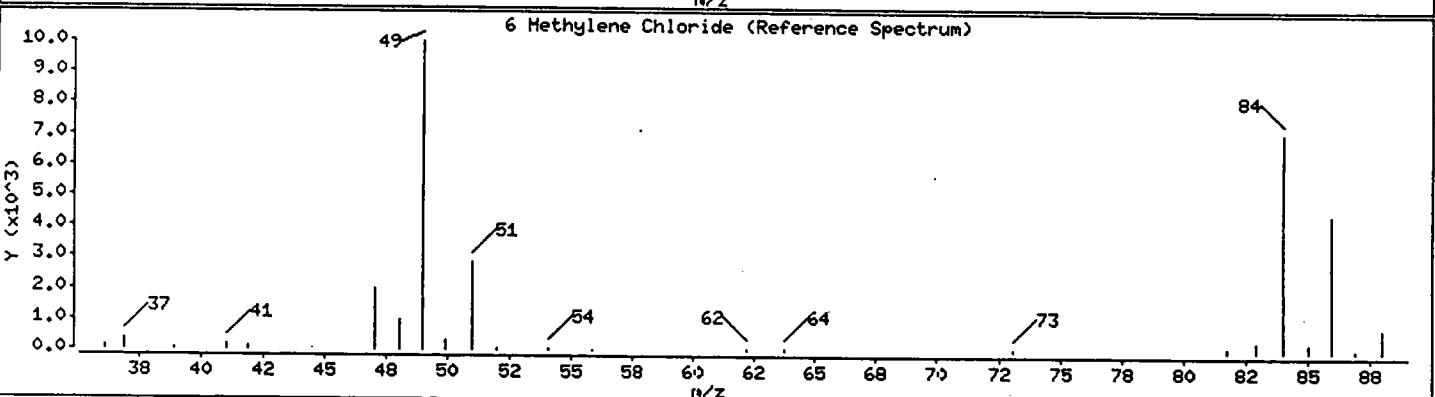
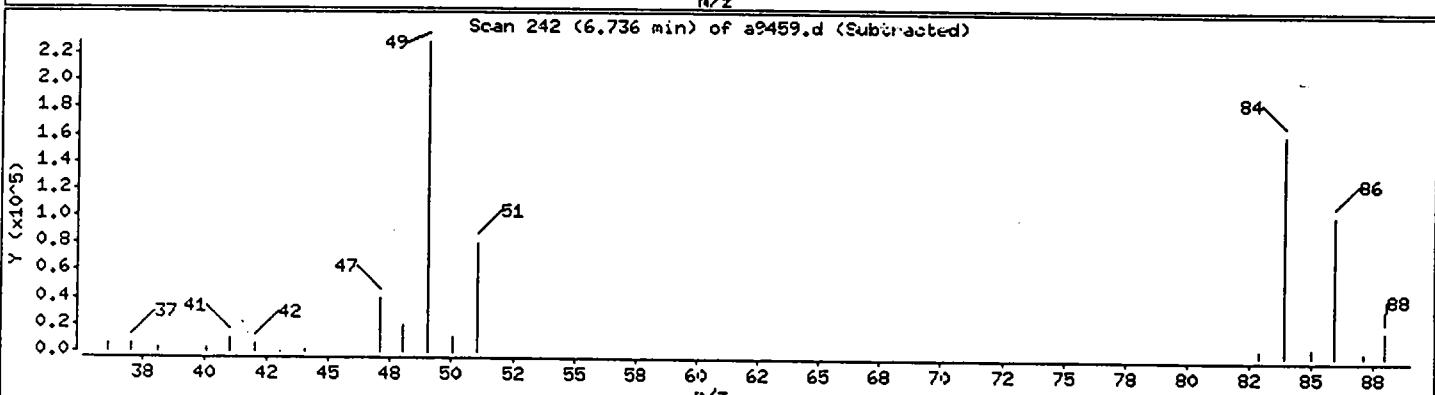
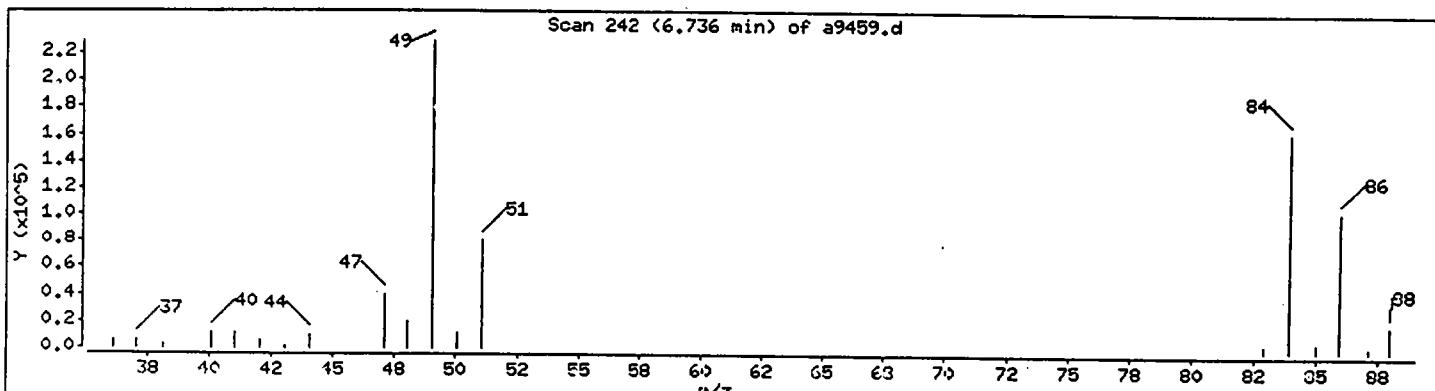
Sample Info: 96868;;10.3;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

6 Methylene Chloride



Data File: /chem/VOAMS1.i/8240LOH/06-C6-97/13jun97.b/a9459.d

Date : 13-JUN-97 11:19:00

Client ID: PX-3

Instrument: VOAMS1.i

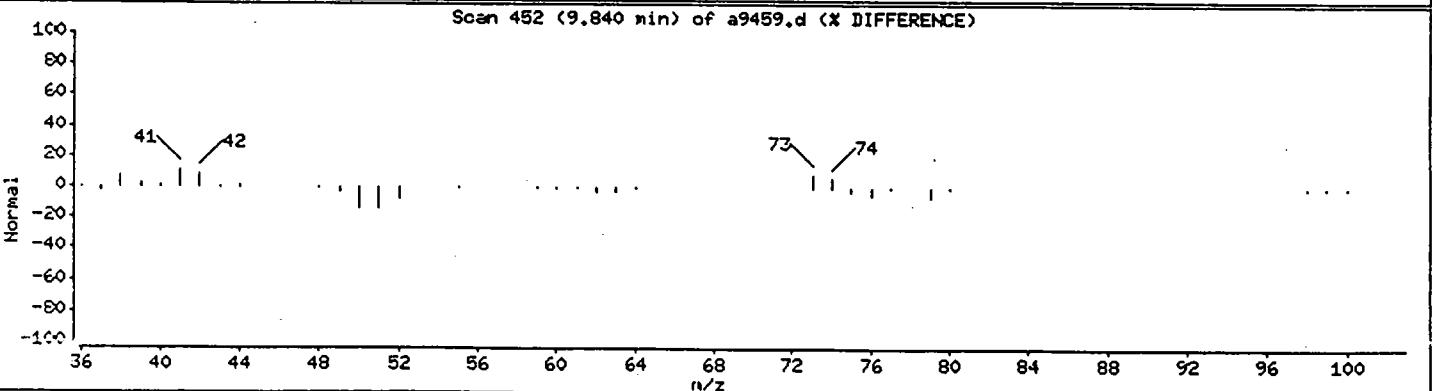
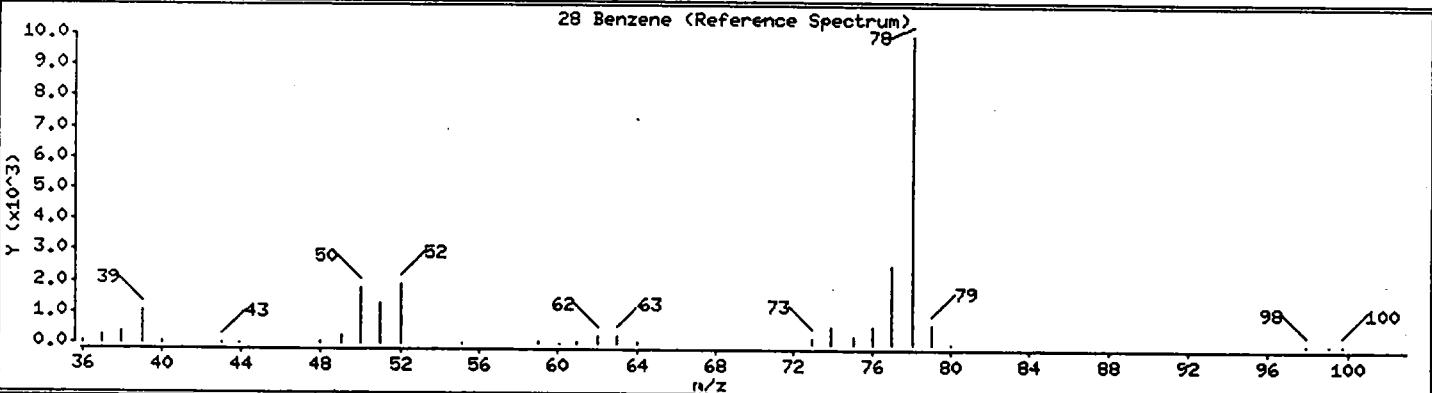
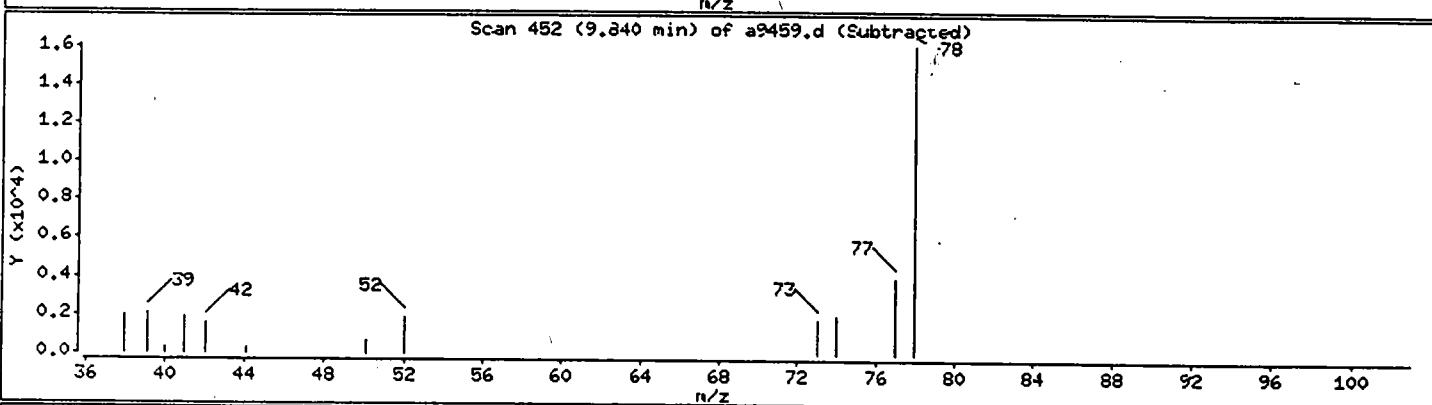
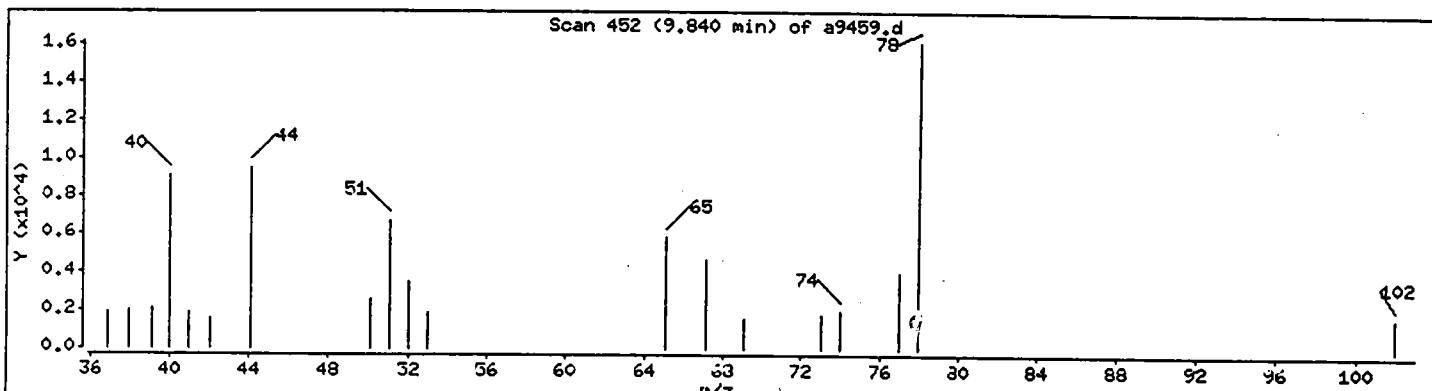
Sample Info: 96868;;10.3;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

28 Benzene



Data File: /chem/VOAMS1.i/8240L01/06-C6-97/13jun97.b/a9459.d

Date : 13-JUN-97 11:19:00

Client ID: PX-3

Instrument: VOAMS1.i

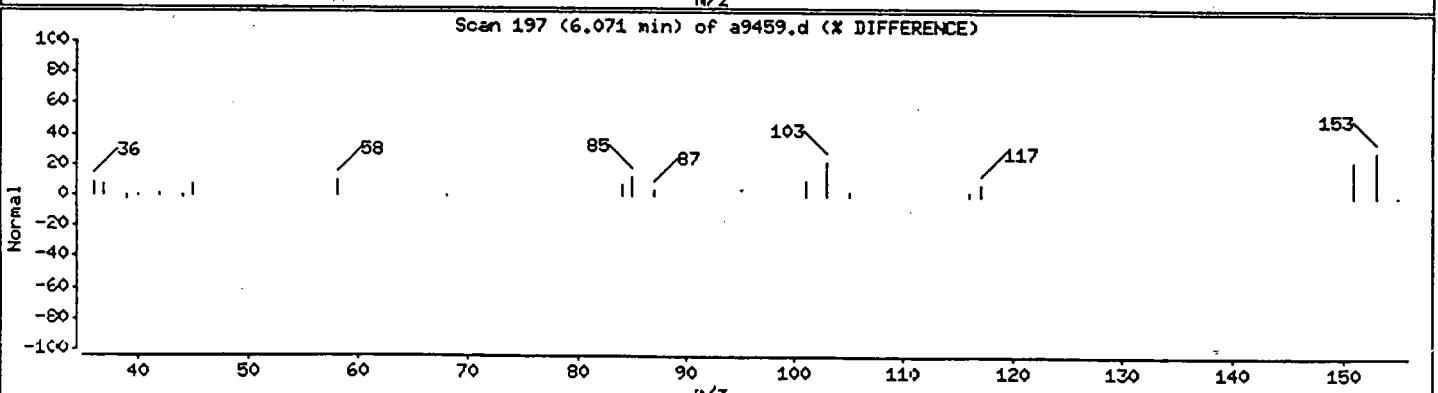
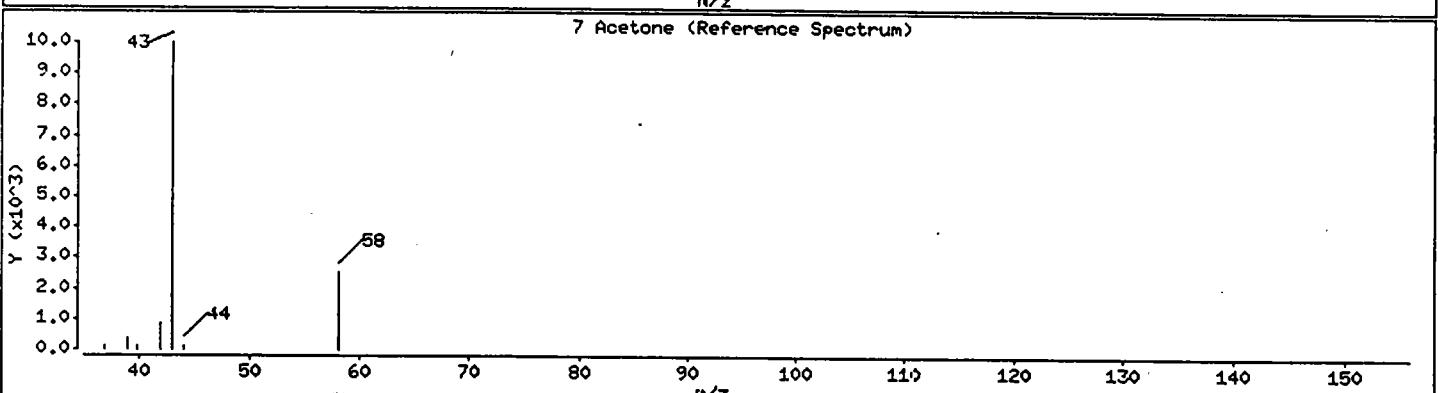
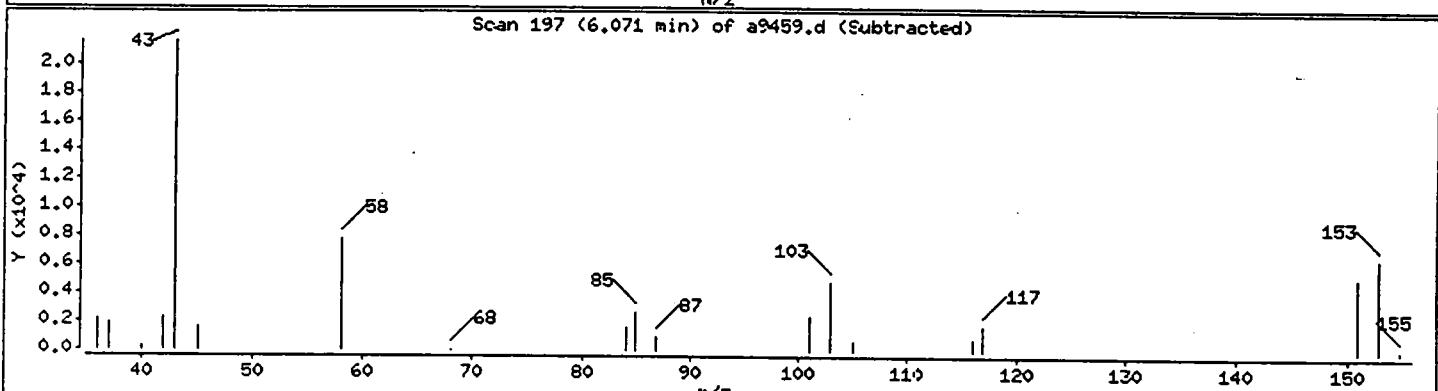
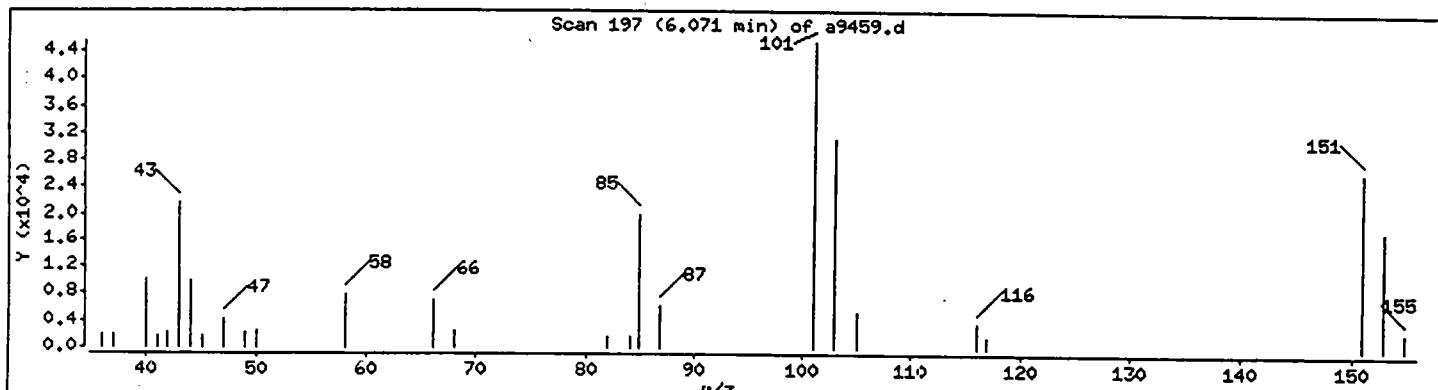
Sample Info: 96868;;10.3;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

7 Acetone



Data File: /chem/V0AMS1.i/8246LOU/06-c6-97/13jun97.b/a9459.d

Date : 13-JUN-97 11:19:00

Client ID: PX-3

Instrument: V0AMS1.i

Sample Info: 96868;;10.3;5;5

Operator: V0AMS 5

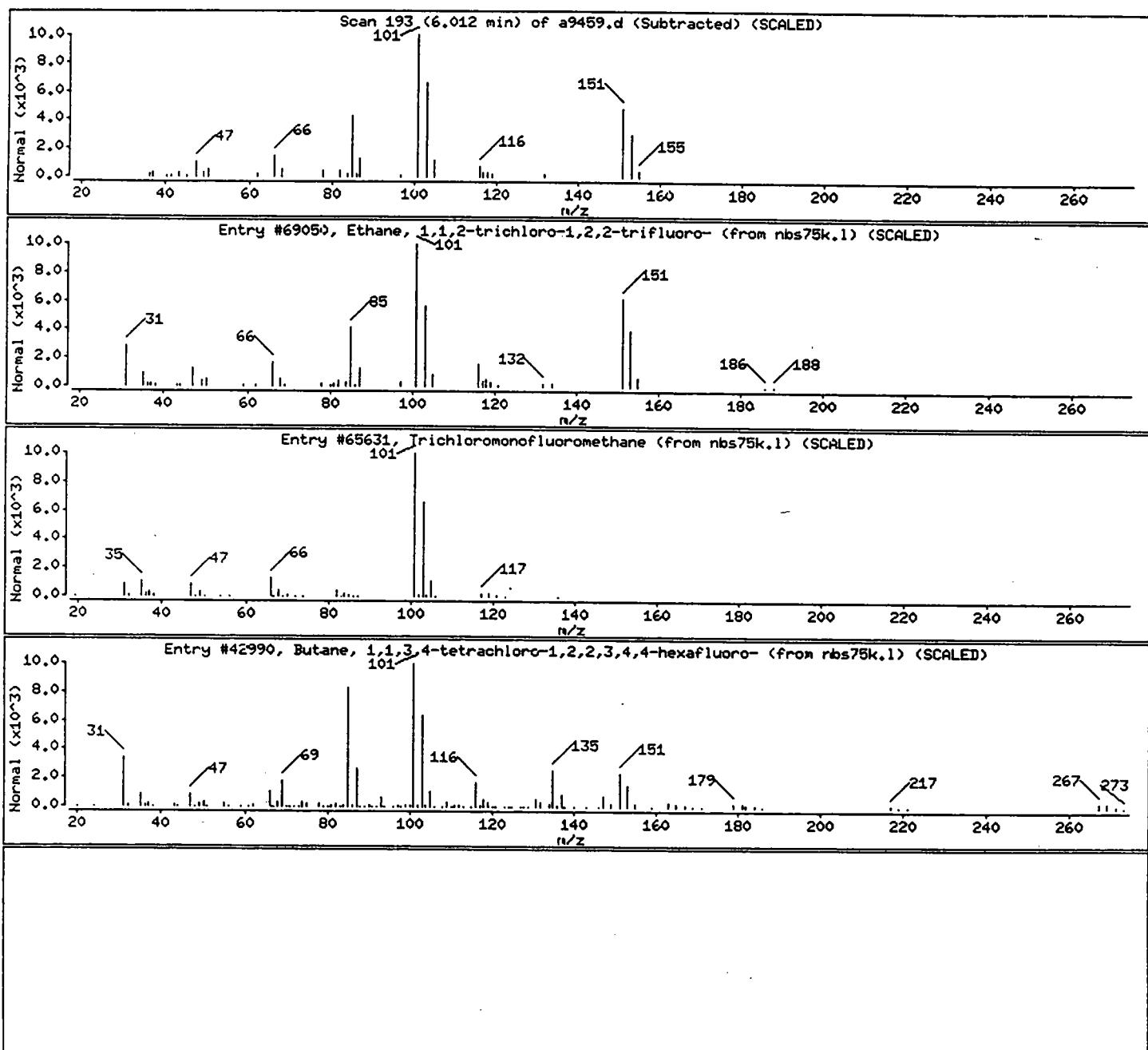
Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

CAS Number	Library	Entry	Quality	Formula	Weight
76-13-1	nbs75k.1	69050	90	C2C13F3	186
75-69-4	nbs75k.1	65631	46	CC13F	136
423-38-1	nbs75k.1	42990	33	C4C14F6	302

Ethane, 1,1,2-trichloro-1,2,2-trifluoro-
Trichloromonofluoromethane
Butane, 1,1,3,4-tetrachloro-1,2,2,3,4,4-



Client ID: PX-4
Site: Ortho Diagnostics

Lab Sample No: 96869
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9460.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 15

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
Chloromethane	ND	1.2
Bromomethane	ND	1.2
Vinyl Chloride	ND	1.2
Chloroethane	ND	1.2
Methylene Chloride	28 B 19	1.2 5.9
Acetone	ND	1.2
Trichlorofluoromethane	ND	1.2
1,1-Dichloroethene	ND	1.2
1,1-Dichloroethane	ND	1.2
trans-1,2-Dichloroethene	ND	1.2
cis-1,2-Dichloroethene	ND	1.2
Chloroform	ND	1.2
1,2-Dichloroethane	ND	1.2
1,1,1-Trichloroethane	ND	1.2
Carbon Tetrachloride	ND	1.2
Bromodichloromethane	ND	1.2
1,2-Dichloropropane	ND	1.2
cis-1,3-Dichloropropene	ND	1.2
Trichloroethene	ND	1.2
Dibromochloromethane	ND	1.2
1,1,2-Trichloroethane	ND	1.2
Benzene	ND	1.2
trans-1,3-Dichloropropene	ND	1.2
2-Chloroethyl Vinyl Ether	ND	1.2
Bromoform	ND	1.2
Tetrachloroethene	ND	1.2
1,1,2,2-Tetrachloroethane	ND	1.2
Toluene	ND	1.2
Chlorobenzene	ND	1.2
Ethylbenzene	ND	1.2
Xylene (Total)	ND	1.2

Client ID: PX-4
Site: Ortho Diagnostics

Lab Sample No: 96869
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9460.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 14.9

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Ethane, 1,1,2-trichloro-1,2,2-trifluor	6.07	28	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			
TOTAL ESTIMATED CONCENTRATION		28	

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9460.d
Report Date: 13-Jun-97 15:03:27

Envirotech Research Inc.

VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9460.d
Lab Smp Id: 96869 Client Smp ID: PX-4
Inj Date : 13-JUN-97 11:48:00
Operator : VOAMS 5 Inst ID: VOAMS1.i
Smp Info : 96869;;14.9;5;5
Misc Info : V393;4418;B26;CN
Comment :
Method : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/IFF8240.m
Meth Date : 13-Jun-97 09:56:07 Quant Type: ISTD
Cal Date : 06-JUN-97 13:06:00 Cal File: a9409.d
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PP_ACE.sub
Target Version: 3.20
Procesing Host: hp735

Concentration Formula: ((Vt/Ws) / ((100 - M)/100))

Name	Value	Description
Vt	5.000	Volume of final extract (mL)
Ws	5.000	Weight of sample extracted (g)
M	14.900	% Moisture (not decanted)

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/L) FINAL (ug/Kg)
6 Methylene Chloride	84	6.794	6.706 (0.754)	539423	23	28	
* 2 Bromochloromethane	128	9.011	8.923 (1.000)	547343	50		
\$ 16 1,2-Dichloroethane-d4 (SUR)	65	9.765	9.677 (0.948)	851901	52	62	
* 19 1,4-Difluorobenzene	114	10.297	10.224 (1.000)	2388010	50		
\$ 37 Toluene-d8 (SUR)	98	12.159	12.086 (1.181)	2536090	49	58	
* 32 Chlorobenzene-d5	117	13.844	13.756 (1.000)	1702327	50		
\$ 41 Bromofluorobenzene (SUR)	174	15.115	15.042 (1.092)	698537	47	56	
7 Acetone	43	6.114	6.085 (0.679)	81141	16	19	

Data File: /chem/VOAHS1.i/8240LOW/06-06-97/13jun97.b/a9460.d

Date : 13-JUN-97 11:48:00

Client ID: PX-4

Sample Info: 96869;;14.9;5;5

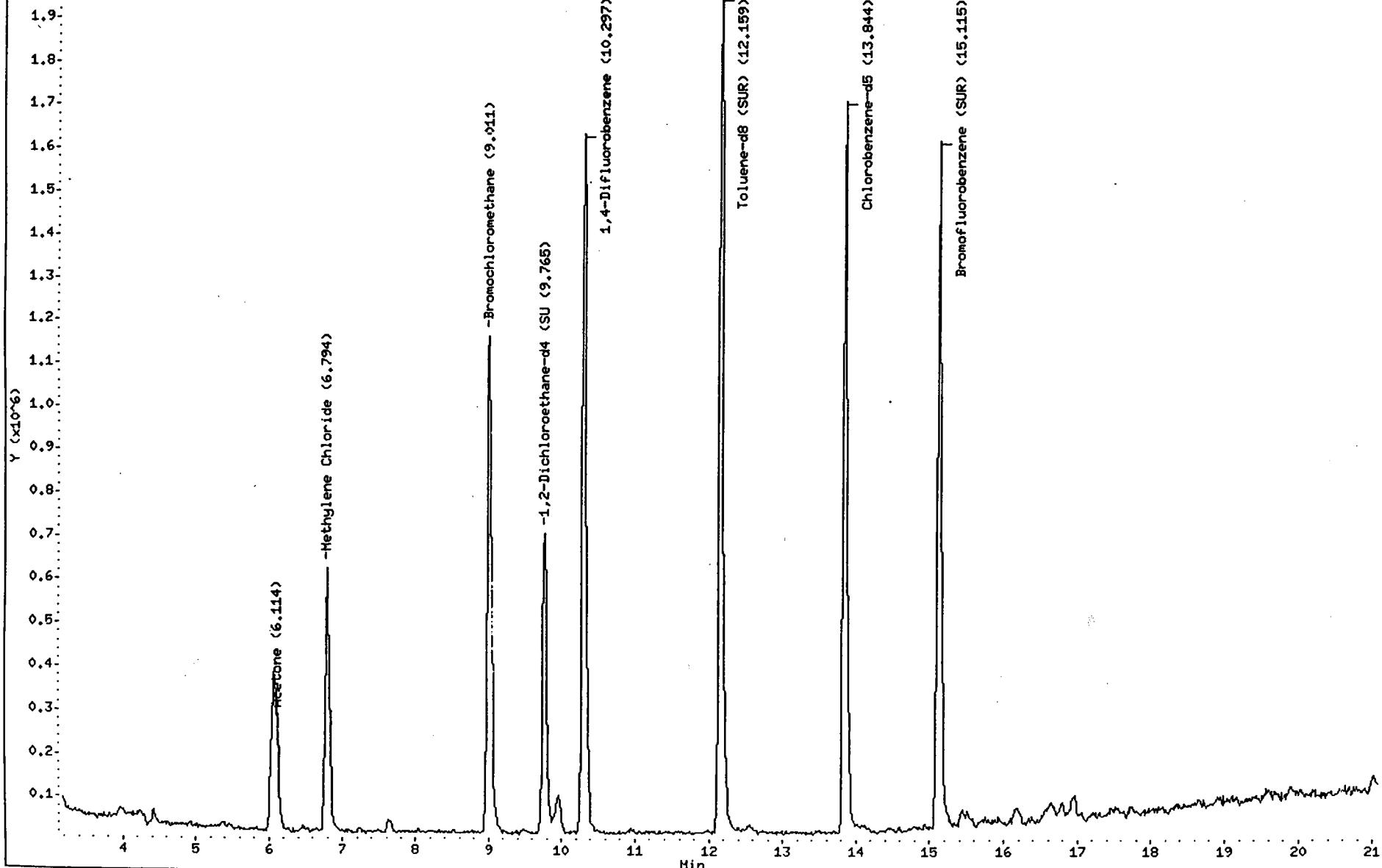
Column phase: DB624

Instrument: VOAHS1.i

Operator: VOAHS 5

Column diameter: 0.53

/chem/VOAHS1.i/8240LOW/06-06-97/13jun97.b/a9460.d



Data File: /chem/VOAMS1.i/924CL04/06-06-97/13jun97.b/a9460.d

Date : 13-JUN-97 11:48:00

Client ID: PX-4

Instrument: VOAMS1.i

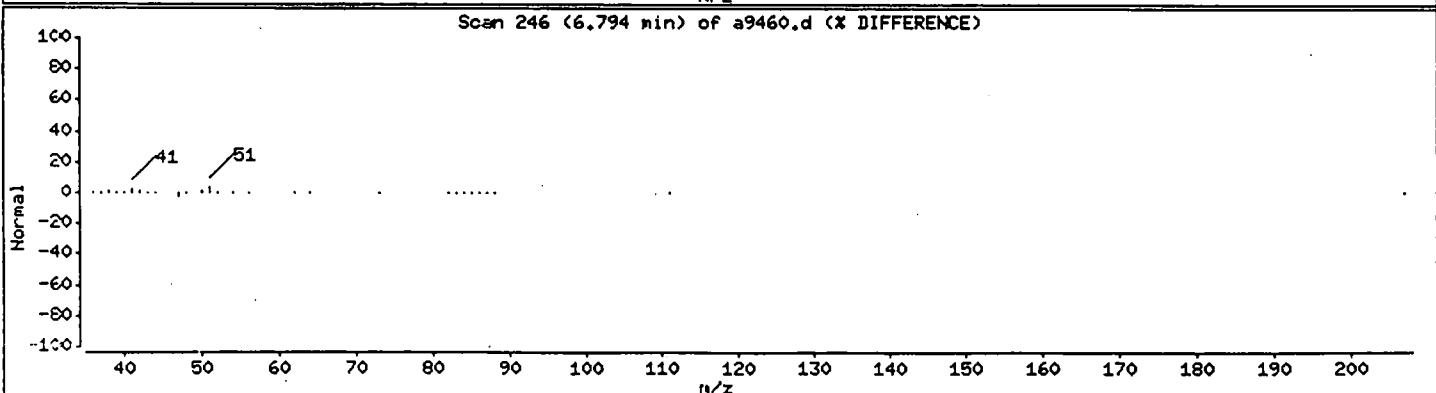
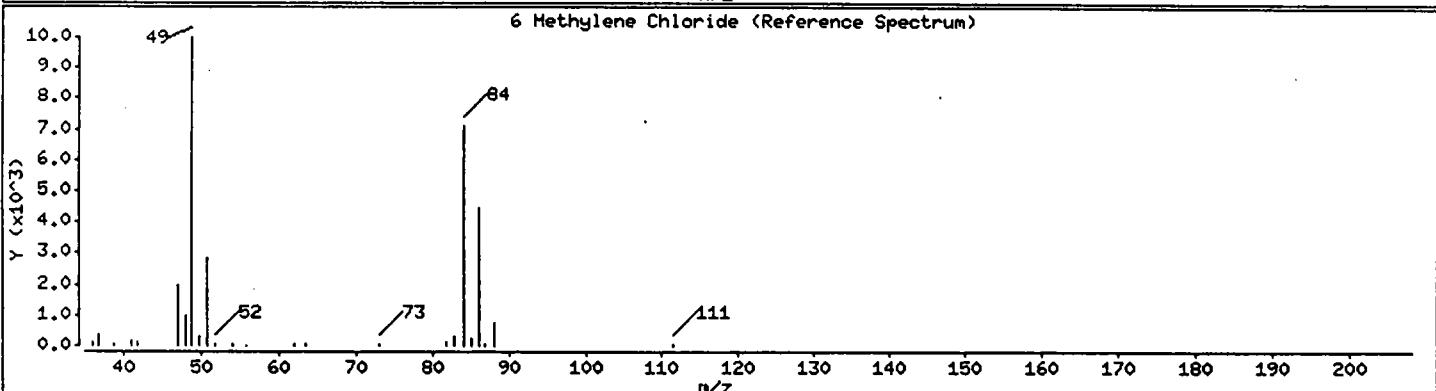
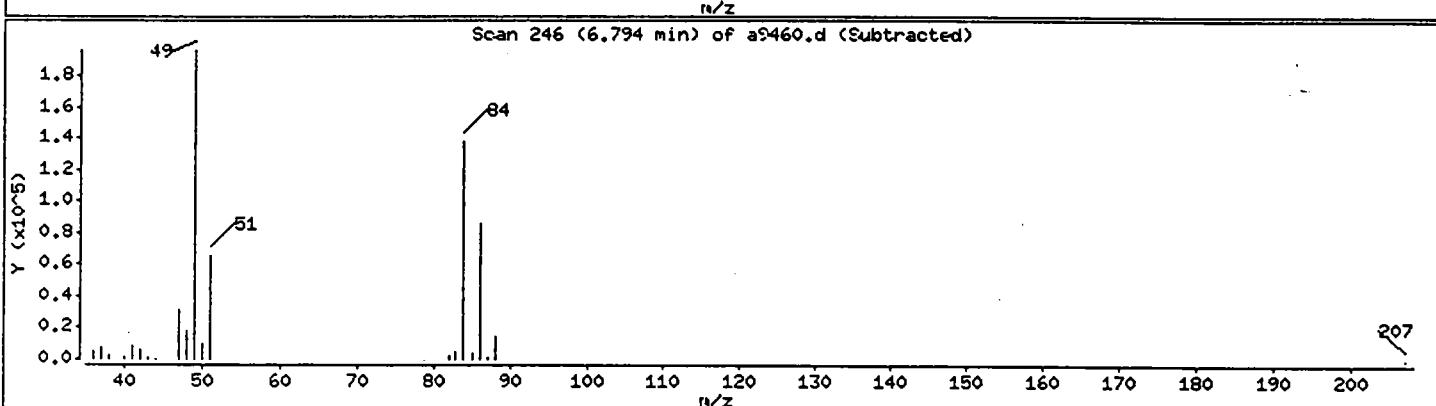
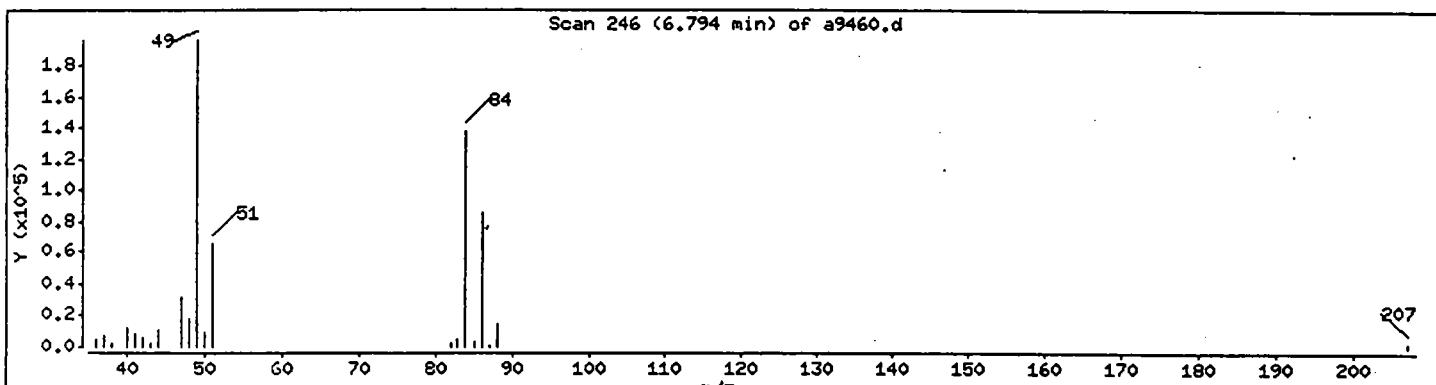
Sample Info: 96869;;14.9;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

6 Methylene Chloride



Data File: /chem/VOAMS1.i/824CLOH/06-C6-97/13jun97.b/a9460.d

Date : 13-JUN-97 11:48:00

Client ID: PX-4

Instrument: VOAMS1.i

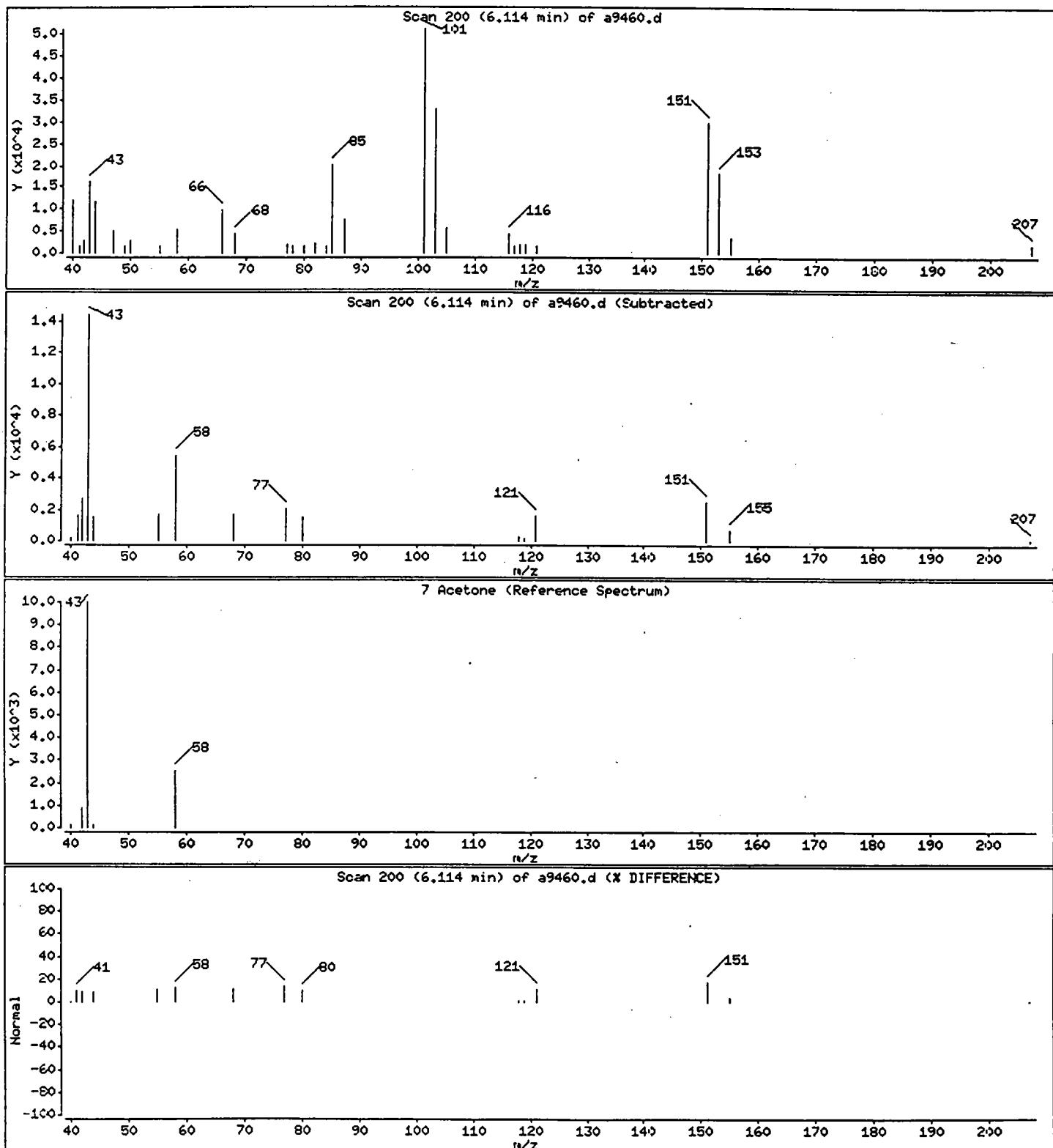
Sample Info: 96869;;14.9;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

7 Acetone



Data File: /chem/VOAMS1.i/8246LOW/06-06-97/13jun97.b/a9460.d

Date : 13-JUN-97 11:48:00

Client ID: PX-4

Instrument: VOAMS1.i

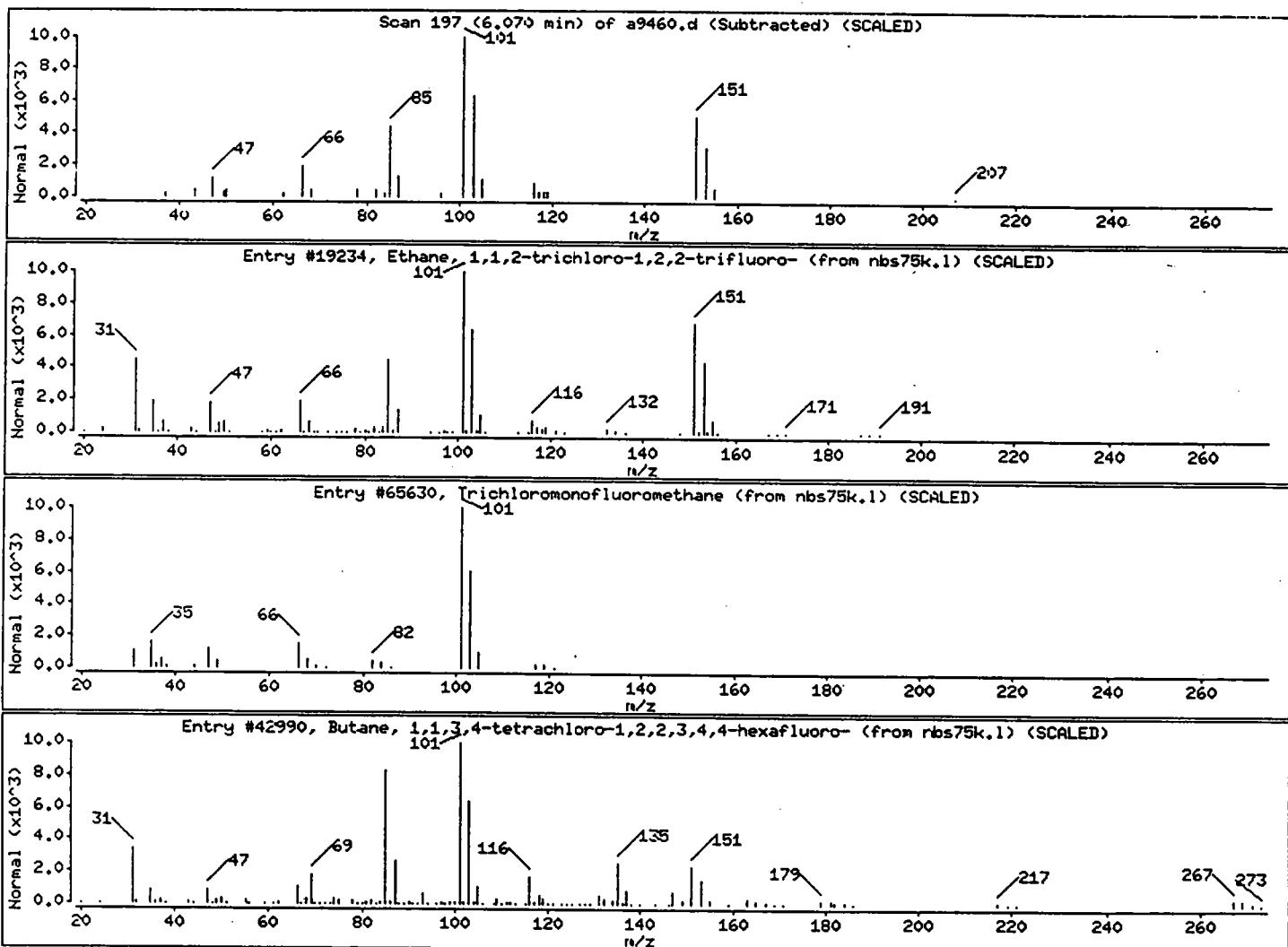
Sample Info: 96869;;14.9;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-	76-13-1	nbs75k.l	19234	83	C2Cl3F3	186
Trichloromonofluoromethane	75-69-4	nbs75k.l	65630	40	CCl3F	136
Butane, 1,1,3,4-tetrachloro-1,2,2,3,4,4-	423-38-1	nbs75k.l	42990	20	C4Cl4F6	302



Client ID: PX-5
Site: Ortho Diagnostics

Lab Sample No: 96870
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9461.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 12

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Chloromethane	ND	1.1
Bromomethane	ND	1.1
Vinyl Chloride	ND	1.1
Chloroethane	ND	1.1
Methylene Chloride	27 B	1.1
Acetone	.15	5.7
Trichlorofluoromethane	ND	1.1
1,1-Dichloroethene	ND	1.1
1,1-Dichloroethane	ND	1.1
trans-1,2-Dichloroethene	ND	1.1
cis-1,2-Dichloroethene	ND	1.1
Chloroform	ND	1.1
1,2-Dichloroethane	ND	1.1
1,1,1-Trichloroethane	ND	1.1
Carbon Tetrachloride	ND	1.1
Bromodichloromethane	ND	1.1
1,2-Dichloropropane	ND	1.1
cis-1,3-Dichloropropene	ND	1.1
Trichloroethene	ND	1.1
Dibromochloromethane	ND	1.1
1,1,2-Trichloroethane	ND	1.1
Benzene	ND	1.1
trans-1,3-Dichloropropene	ND	1.1
2-Chloroethyl Vinyl Ether	ND	1.1
Bromoform	ND	1.1
Tetrachloroethene	1.0J	1.1
1,1,2,2-Tetrachloroethane	ND	1.1
Toluene	ND	1.1
Chlorobenzene	ND	1.1
Ethylbenzene	ND	1.1
Xylene (Total)	ND	1.1

Client ID: PX-5
Site: Ortho Diagnostics

Lab Sample No: 96870
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9461.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 11.8

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. C11H24 Alkane	15.43	51	
2. C11H24 Alkane	15.74	49	
3. Unknown Hydrocarbon	16.19	49	
4. C11H24 Alkane	16.64	78	
5. Unknown	17.00	35	
6. C12H26 Alkane	17.80	40	
7. Unknown Alkane	18.64	44	
8. Unknown	19.08	37	
9. Unknown Alkane	19.90	51	
10. Unknown Alkane	21.00	59	
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

493

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9461.d
Report Date: 13-Jun-97 15:03:31

Envirotech Research Inc.

VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9461.d
Lab Smp Id: 96870 Client Smp ID: PX-5
Inj Date : 13-JUN-97 12:18:00
Operator : VOAMS 5 Inst ID: VOAMS1.i
Smp Info : 96870;;11.8;5;5
Misc Info : V393;4418;B26;CN
Comment :
Method : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/IFF8240.m
Meth Date : 13-Jun-97 09:56:07 Quant Type: ISTD
Cal Date : 06-JUN-97 13:06:00 Cal File: a9409.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.20 Compound Sublist: PP_ACE.sub
Procesing Host: hp735

Concentration Formula: ((Vt/Ws) / ((100 - M)/100))

Name	Value	Description
Vt	5.000	Volume of final extract (mL)
Ws	5.000	Weight of sample extracted (g)
M	11.800	% Moisture (not decanted)

Compounds	QUANT SIG				CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/L)	FINAL (ug/Kg)
6 Methylene Chloride	84	6.801	6.706 (0.755)		723514	24	27
* 2 Bromochloromethane	128	9.003	8.923 (1.000)		731445	50	
\$ 16 1,2-Dichloroethane-d4 (SUR)	65	9.757	9.677 (0.947)		1132958	52	59
* 19 1,4-Difluorobenzene	114	10.304	10.224 (1.000)		3181190	50	
\$ 37 Toluene-d8 (SUR)	98	12.151	12.086 (1.179)		3302379	48	54
35 Tetrachloroethene	166	12.920	12.840 (0.934)		20775	0.93	1.0(a)
* 32 Chlorobenzene-d5	117	13.836	13.756 (1.000)		2156786	50	
\$ 41 Bromofluorobenzene (SUR)	174	15.122	15.042 (1.093)		894314	48	54
7 Acetone	43	6.121	6.085 (0.680)		92625	14	15

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/VOAMS1.1/8240LOW/06-06-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Sample Info: 96870;;11.8;5;5

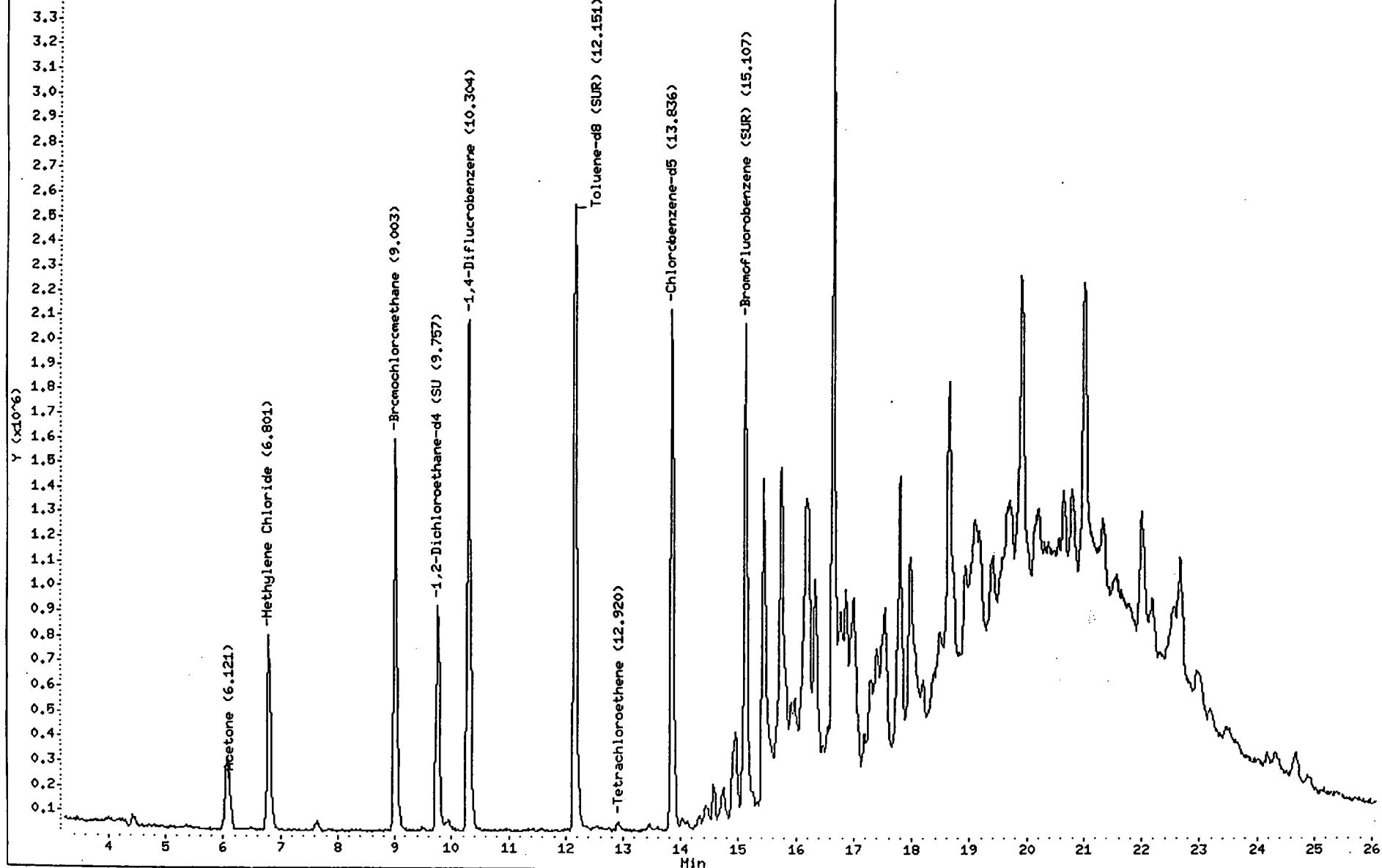
Column phase: DB624

Instrument: VOAMS1.i

Operator: VOAMS 5

Column diameter: 0.53

'chem/VOAMS1.1/8240LOW/06-06-97/13jun97.b/a9461.d



Data File: /chem/VOAMS1.i/824CLOW/06-C6-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: VOAMS1.i

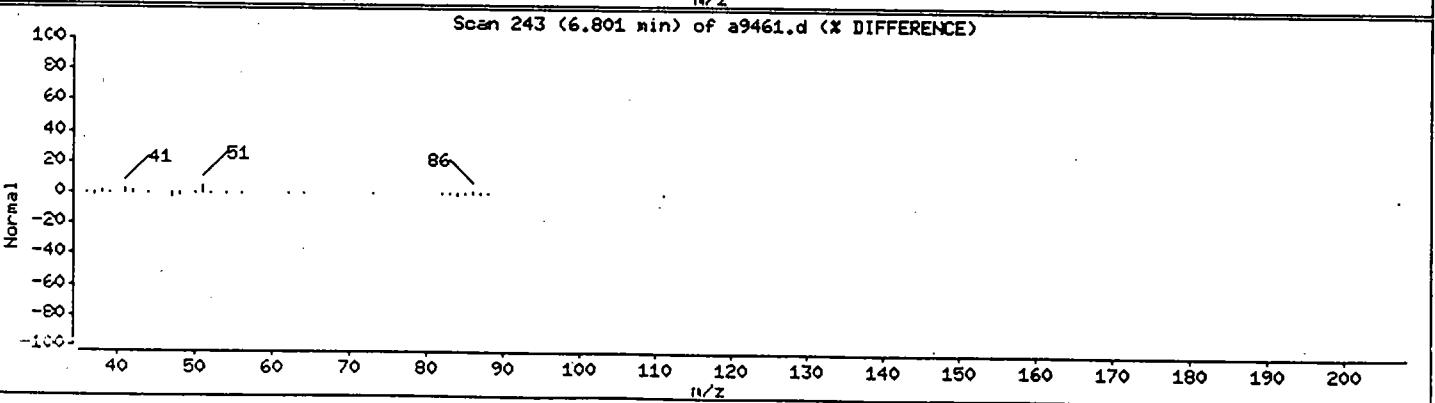
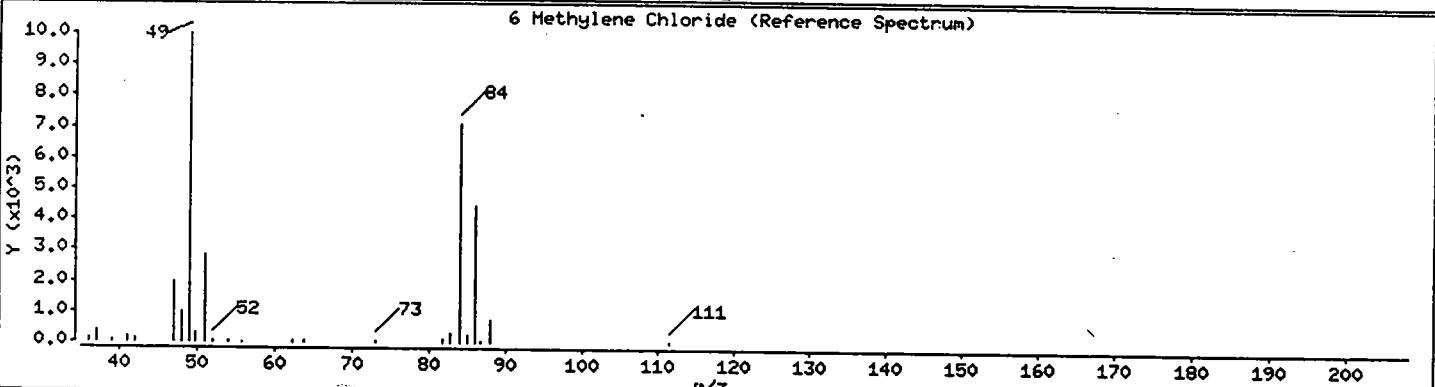
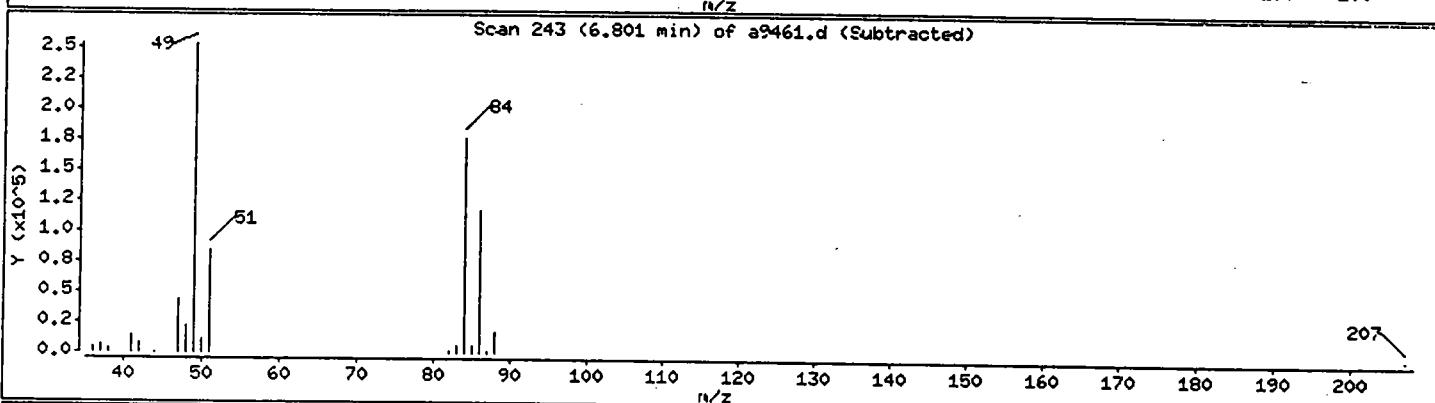
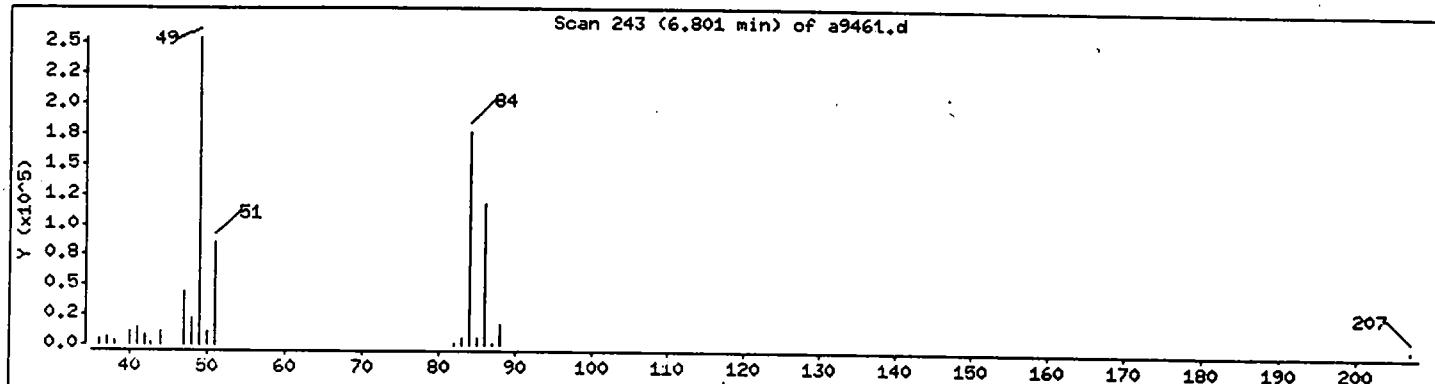
Sample Info: 96870;;11.8;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

6 Methylene Chloride



Data File: /chem/VOAMS1.i/824CLOU/06-06-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: VOAMS1.i

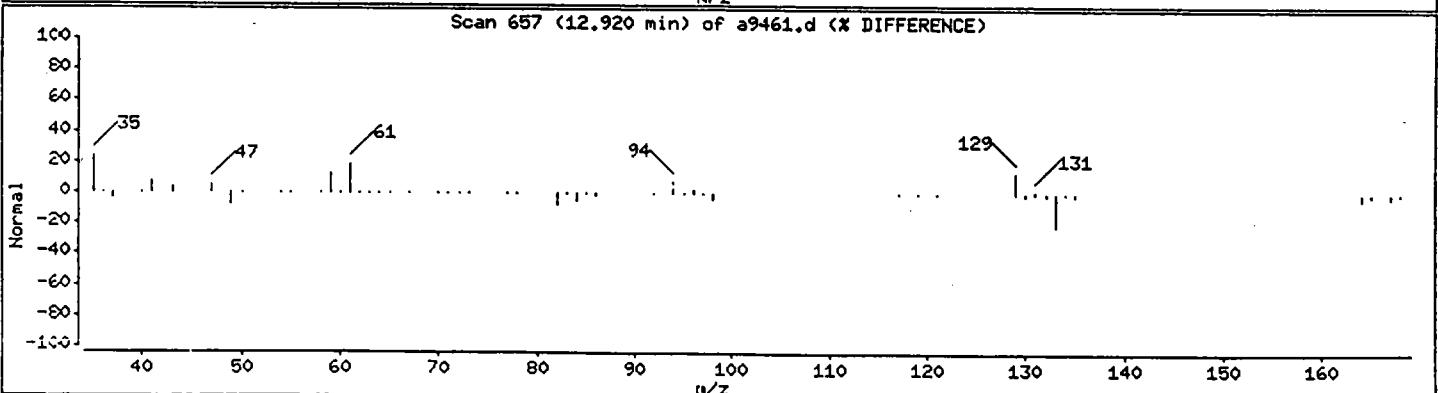
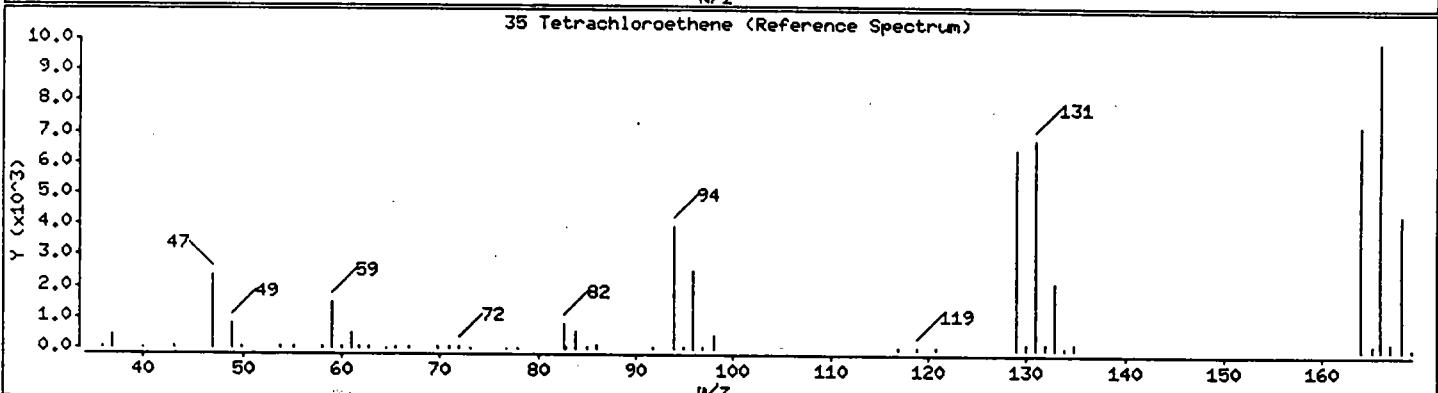
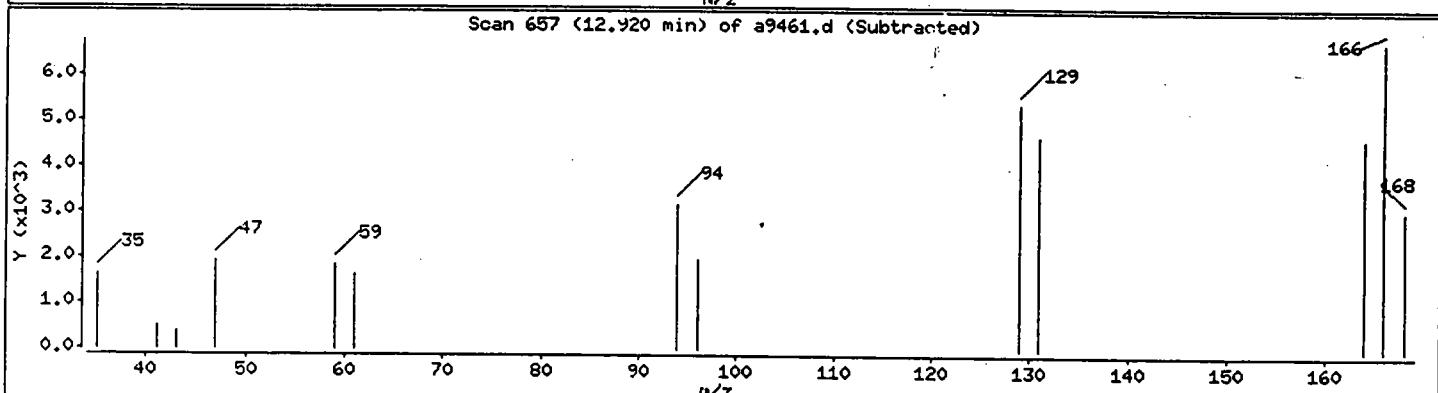
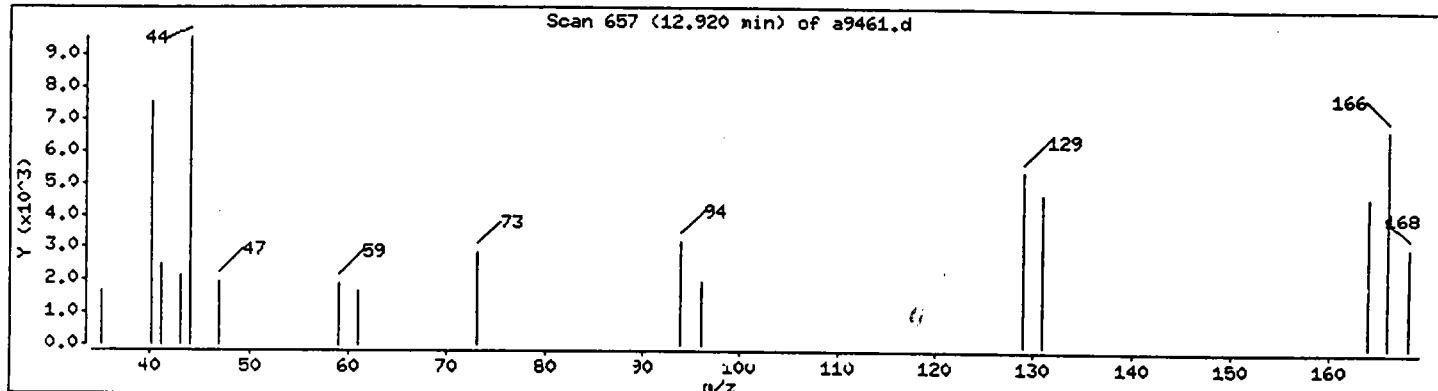
Sample Info: 96870;;11.8;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

35 Tetrachloroethene



Data File: /chem/VOAMHS1.i/824CLOH/06-C6-97/13Jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: VOAMHS1.i

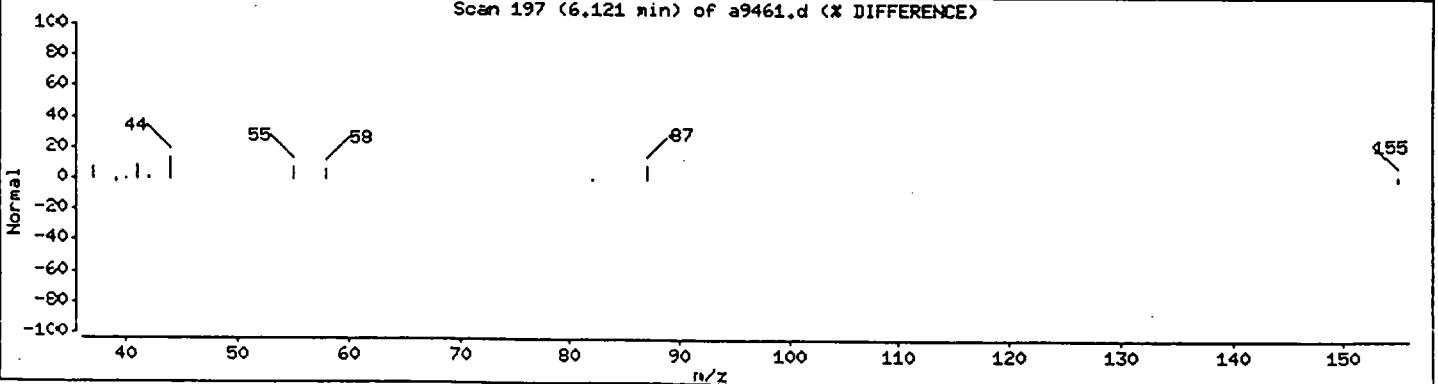
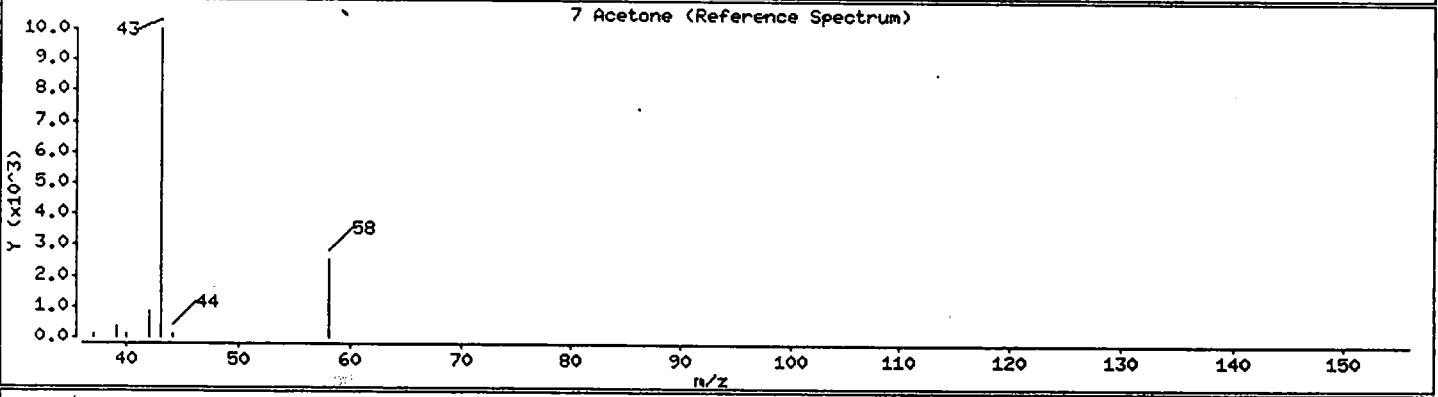
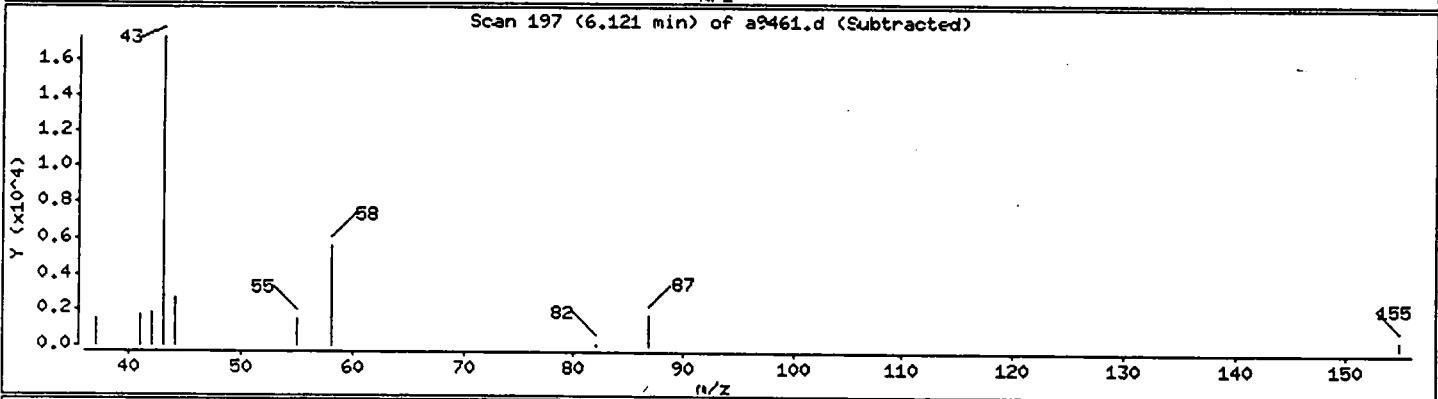
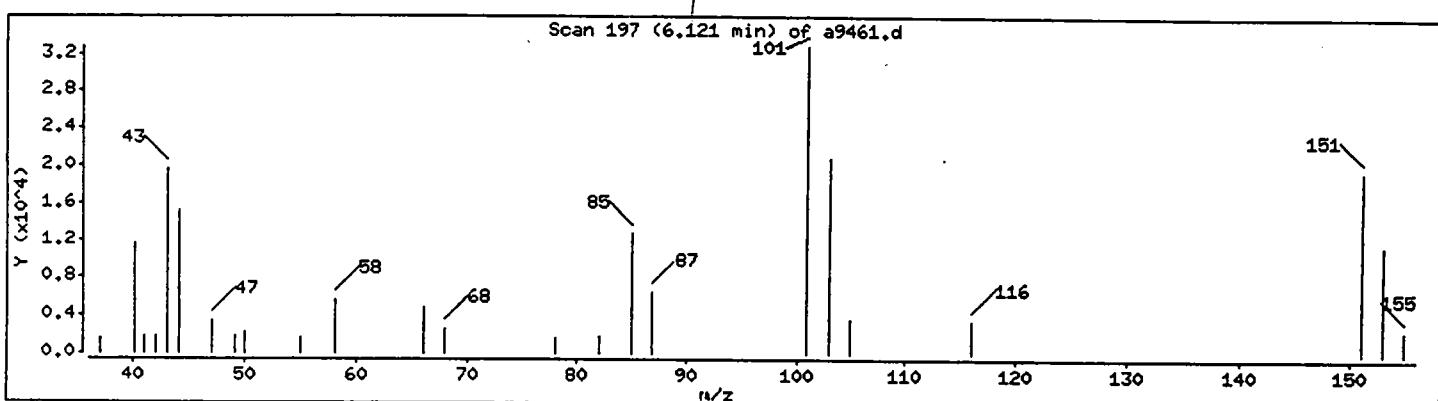
Sample Info: 96870;;11.8;5;5

Operator: VOAMHS 5

Column phase: DB624

Column diameter: 0.53

7 Acetone



Data File: /chem/VOAMS1.i/824CLOW/06-06-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: VOAMS1.i

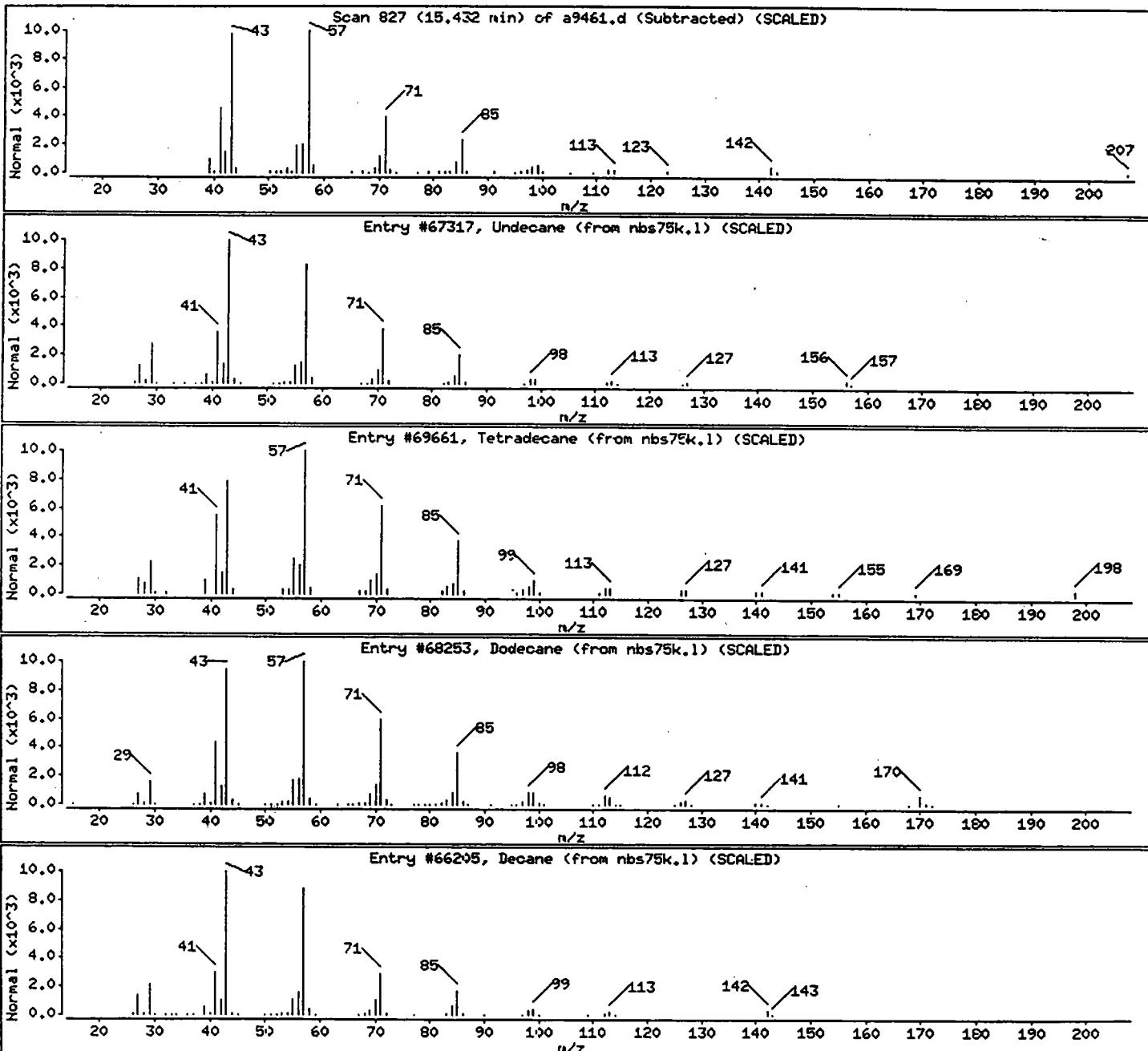
Sample Info: %6870::11.8;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
C11H24 Alkane						
Undecane	1120-21-4	nbs75k.1	67317	90	C11H24	156
Tetradecane	629-59-4	nbs75k.1	69661	90	C14H30	198
Dodecane	112-40-3	nbs75k.1	68253	90	C12H26	170
Decane	124-18-5	nbs75k.1	66205	87	C10H22	142



Data File: /chem/VOAMS1.i/824CLOH/06-06-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: VOAMS1.i

Sample Info: 96870;;11.8;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

C11H24 Alkane

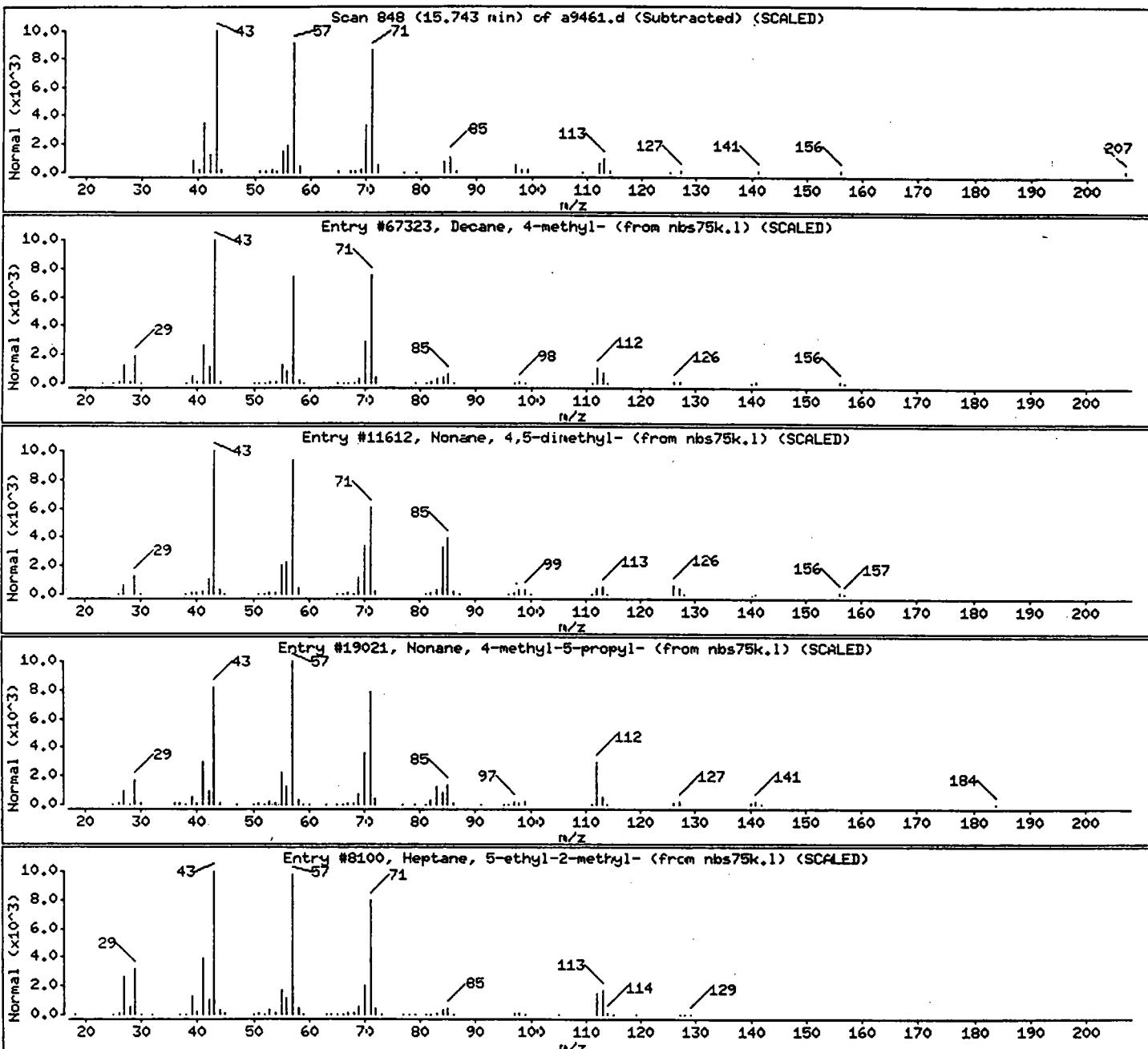
Decane, 4-methyl-

	CAS Number	Library	Entry	Quality	Formula	Weight
Decane, 4-methyl-	2847-72-5	nbs75k.1	67323	90	C11H24	156
Nonane, 4,5-dimethyl-	17302-23-7	nbs75k.1	11612	80	C11H24	156
Nonane, 4-methyl-5-propyl-	62185-55-1	nbs75k.1	19021	78	C13H28	184
Heptane, 5-ethyl-2-methyl-	13475-78-0	nbs75k.1	8100	78	C10H22	142

Nonane, 4,5-dimethyl-

Nonane, 4-methyl-5-propyl-

Heptane, 5-ethyl-2-methyl-



Data File: /chem/VOAMS1.i/824CLOH/06-C6-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: VOAMS1.i

Sample Info: 96870;;11.8;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

Unknown Hydrocarbon

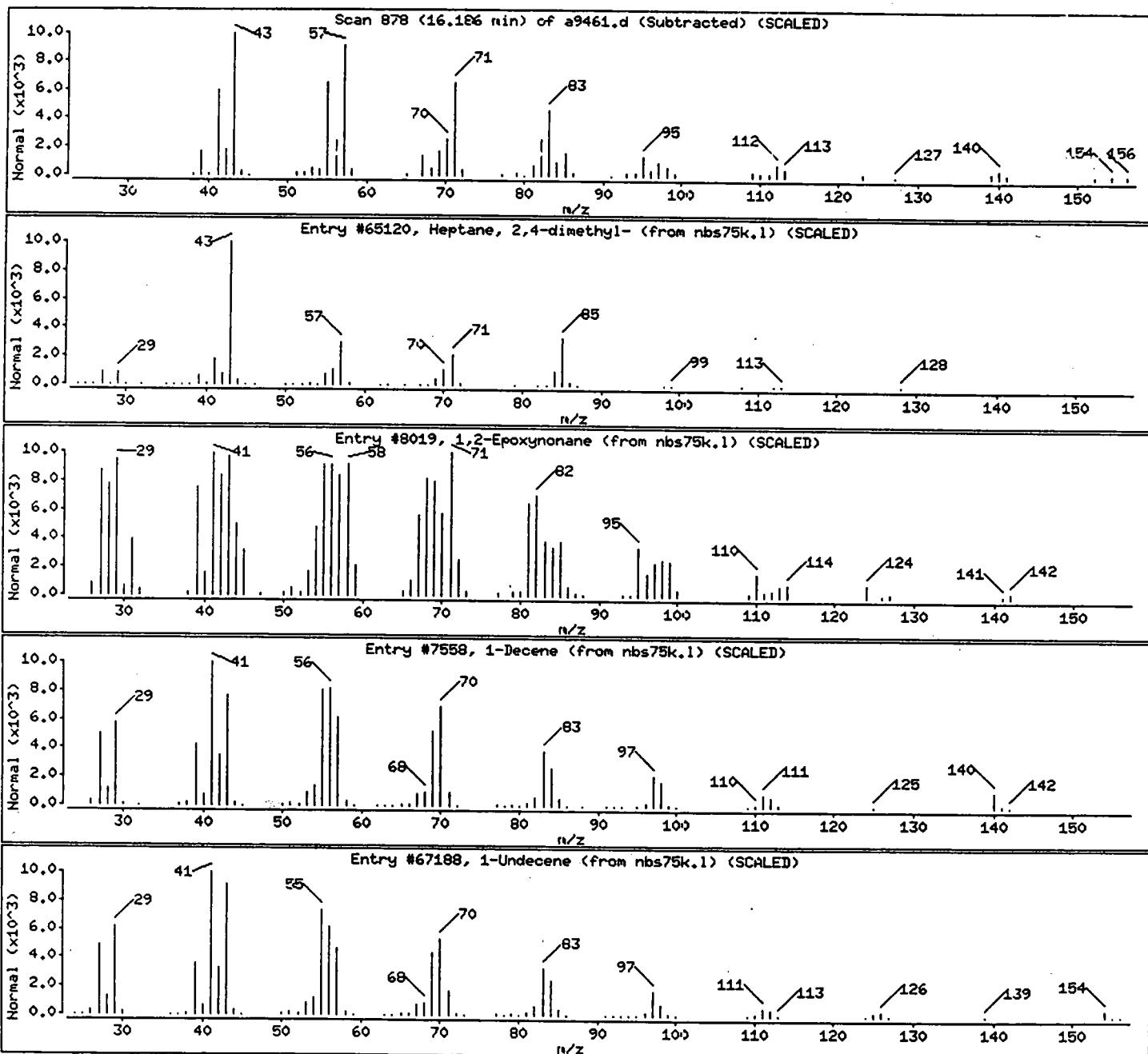
Heptane, 2,4-dimethyl-

1,2-Epoxyhexane

1-Decene

1-Undecene

	CAS Number	Library	Entry	Quality	Formula	Weight
Heptane, 2,4-dimethyl-	2213-23-2	nbs75k.1	65120	49	C9H20	128
1,2-Epoxyhexane	28114-20-7	nbs75k.1	8019	27	C9H18O	142
1-Decene	872-05-9	nbs75k.1	7558	25	C10H20	140
1-Undecene	821-95-4	nbs75k.1	67188	25	C11H22	154



Data File: /chem/VOAMS1.i /924CLOH/06-C6-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: VOAMS1.i

Sample Info: 96870;;11.8;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Hatch

C11H24 Alkane

Undecane

CAS Number

Library

Entry

Quality

Formula

Weight

Tetradecane

1120-21-4

nbs75k.l

67317

97

C11H24

156

Tridecane

629-59-4

nbs75k.l

69661

90

C14H30

156

Decane

629-50-5

nbs75k.l

69019

90

C13H28

156

124-18-5

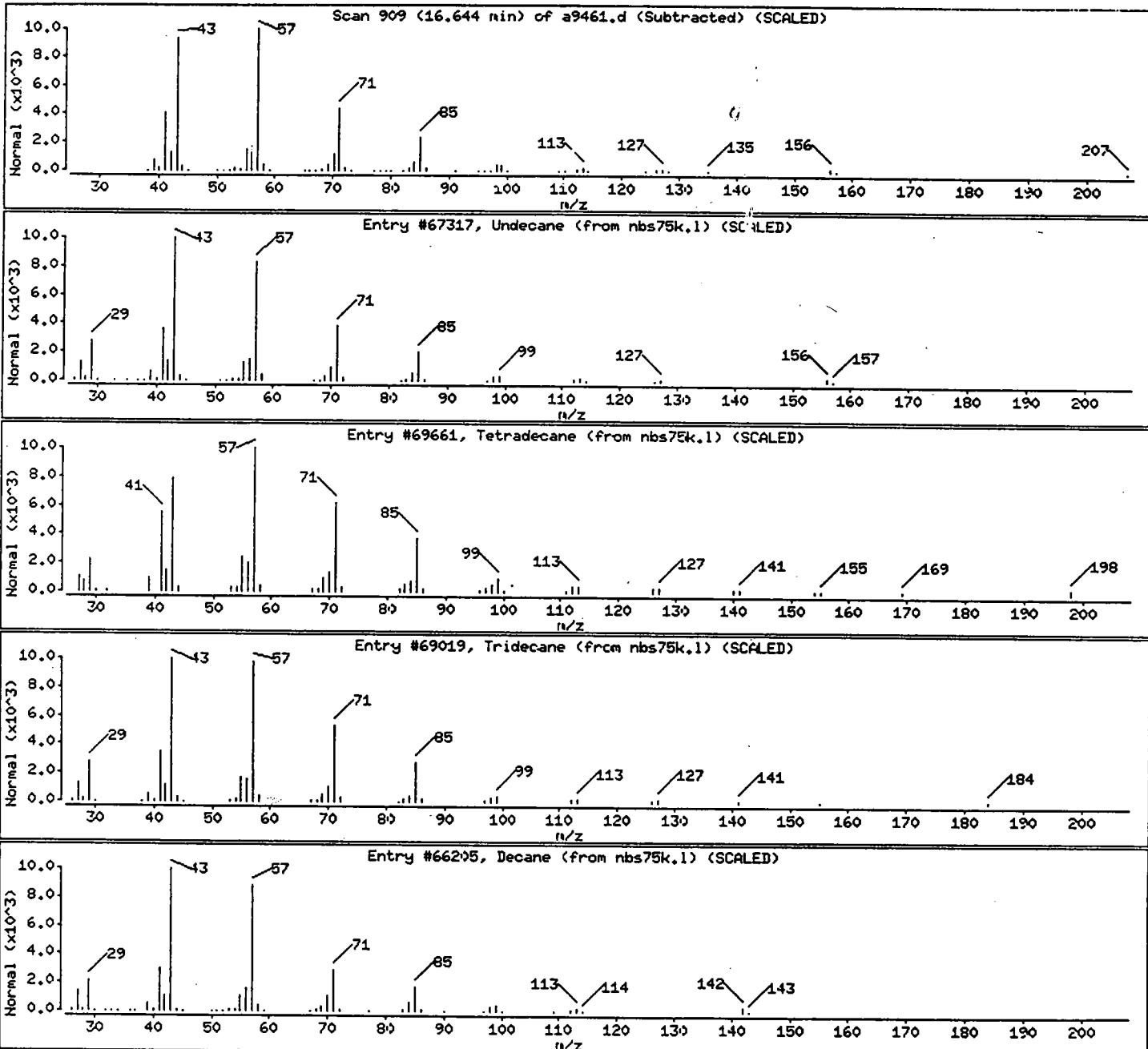
nbs75k.l

66205

90

C10H22

142



Data File: /chem/VOAMS1.i/8240LOH/06-C6-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: VOAMS1.i

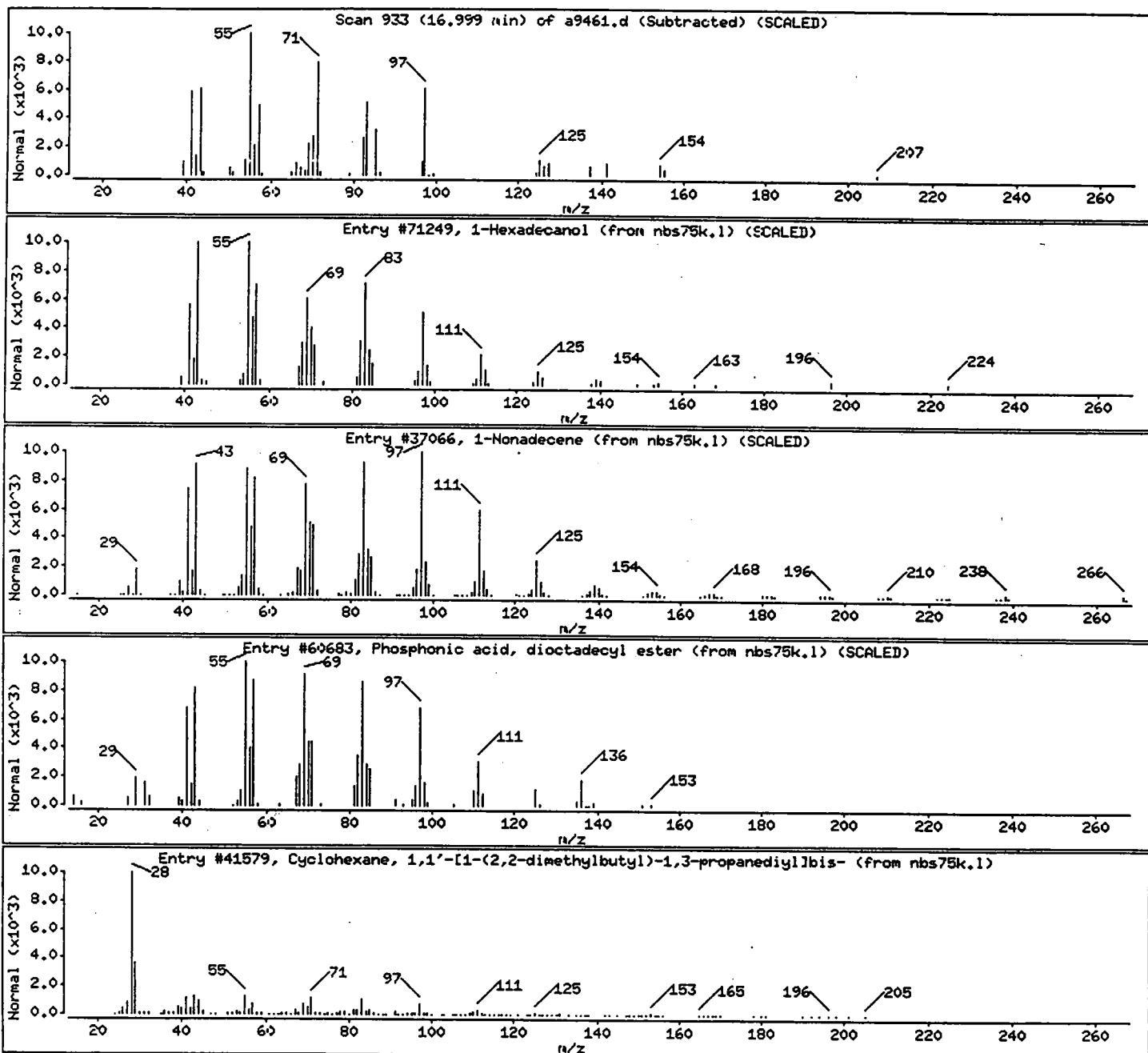
Sample Info: 96870;;11.8;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: .0.53

Library Search Compound Hatch	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Hexadecanol	36653-82-4	nbs75k.1	71249	47	C16H34O	242
1-Nonadecene	18435-45-5	nbs75k.1	37066	40	C19H38	266
Phosphonic acid, dioctadecyl ester	19047-85-9	nbs75k.1	60683	40	C36H75O3P	587
Cyclohexane, 1,1'-(1-(2,2-dimethylbutyl)-1,3-propanediyl)bis-	61142-63-0	nbs75k.1	41579	38	C21H40	292



Data File: /chem/VOAMS1.i/824CLOH/06-06-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: VOAMS1.i

Sample Info: 96870;;11.8;5;5

Operator: VOAMS 5

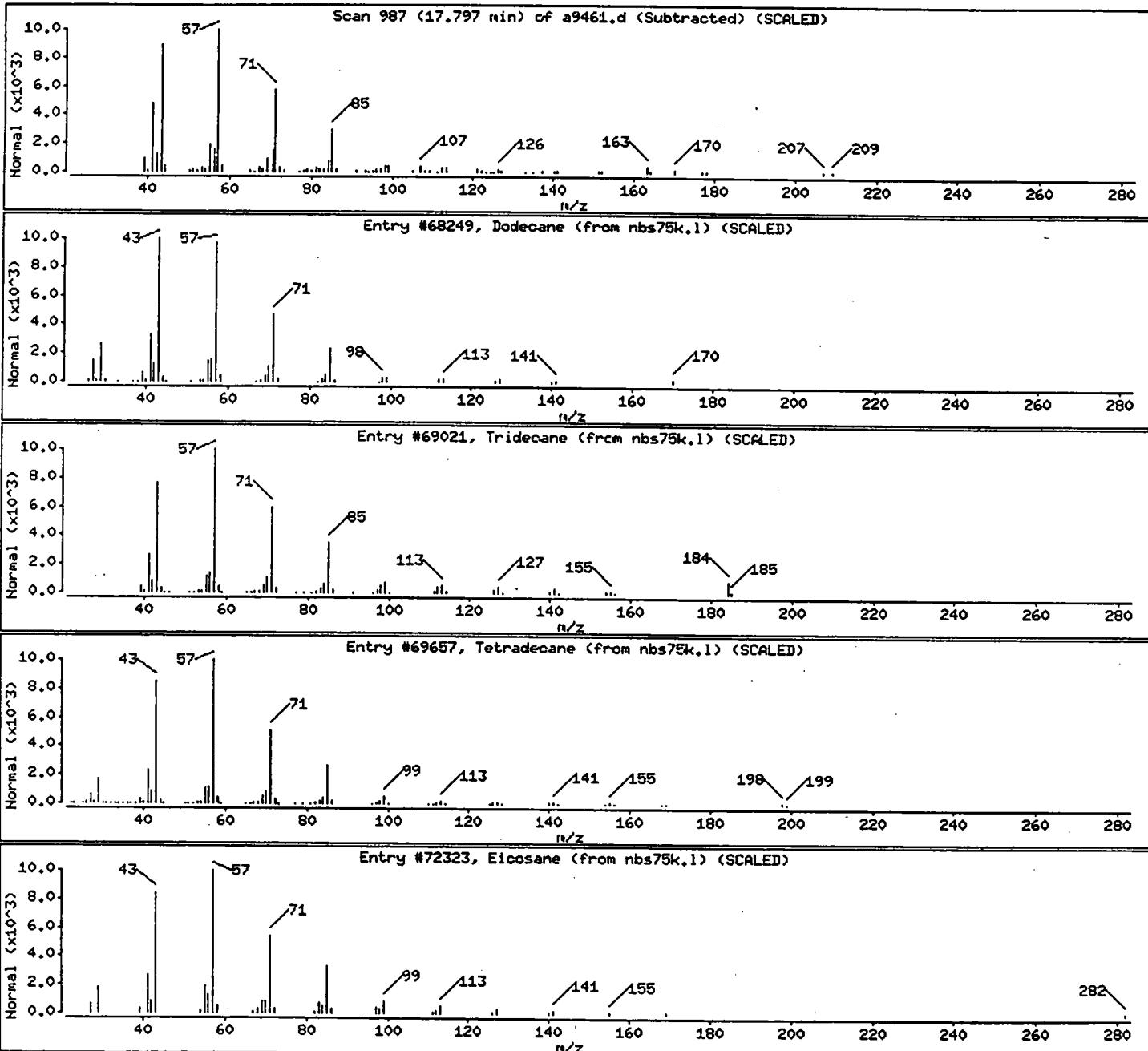
Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

C12H26 Alkane

	CAS Number	Library	Entry	Quality	Formula	Weight
Dodecane	112-40-3	nbs75k.1	68249	93	C12H26	170
Tridecane	629-50-5	nbs75k.1	69021	86	C13H28	184
Tetradecane	629-59-4	nbs75k.1	69657	72	C14H30	198
Eicosane	112-95-8	nbs75k.1	72323	72	C20H42	282



Data File: /chem/V0AHS1.i/824CLOH/06-06-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: V0AHS1.i

Sample Info: 96870;;11.8;5;5

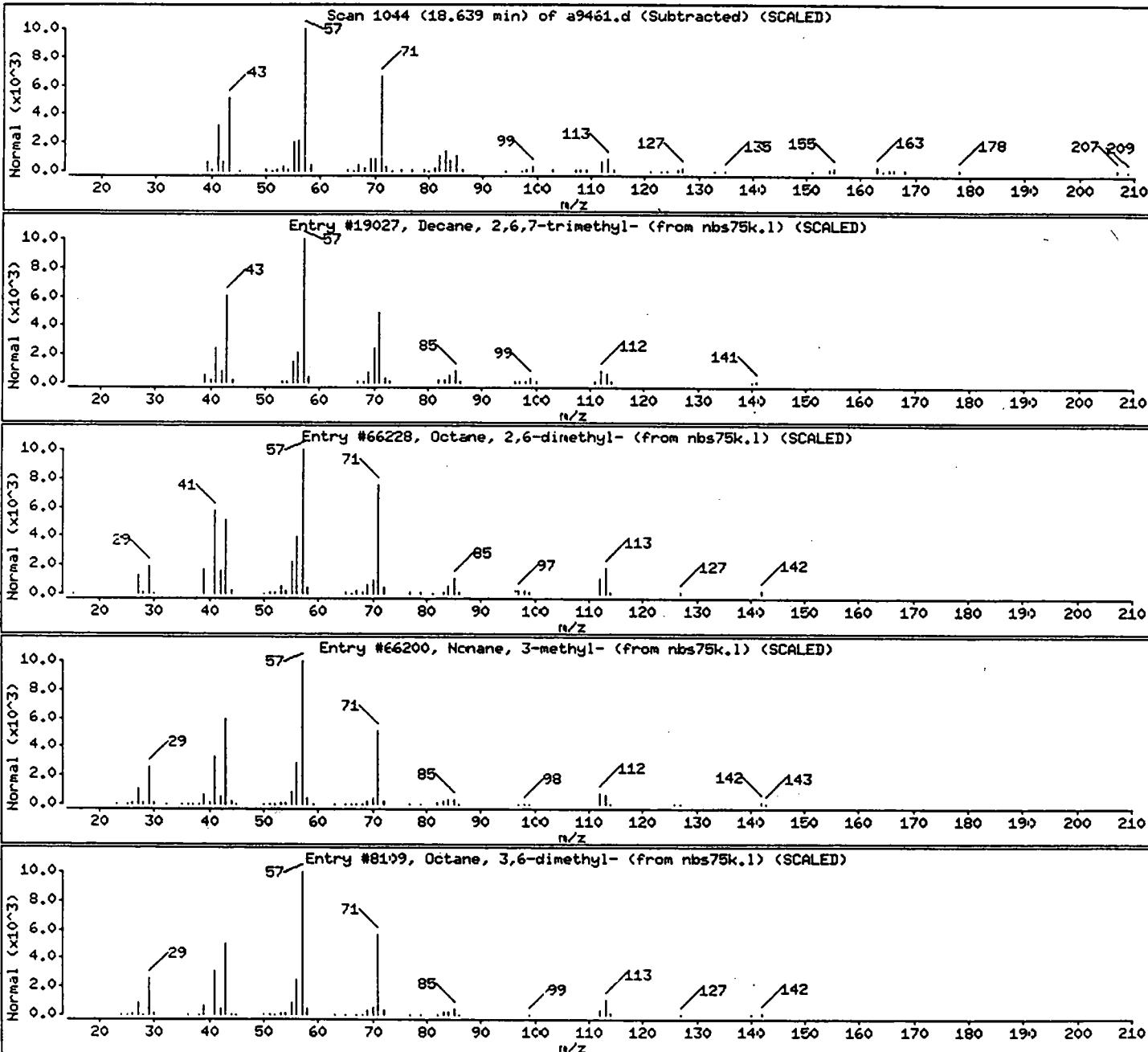
Operator: V0AHS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Hatch

	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Alkane						
Decane, 2,6,7-trimethyl-	62108-25-2	nbs75k.1	19027	72	C13H28	184
Octane, 2,6-dimethyl-	2051-30-1	nbs75k.1	66228	59	C10H22	142
Nonane, 3-methyl-	5911-04-6	nbs75k.1	66200	59	C10H22	142
Octane, 3,6-dimethyl-	15869-94-0	nbs75k.1	8109	59	C10H22	142



Data File: /chem/VOAMS1.i/824CL0N/06-C6-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: VOAMS1.i

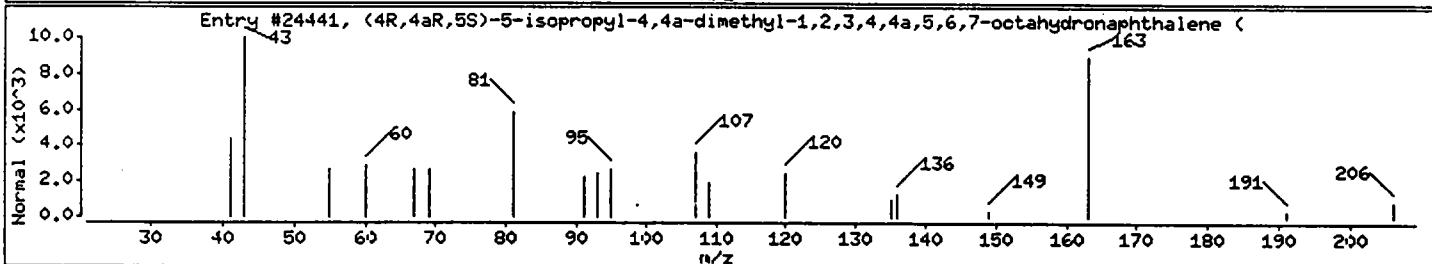
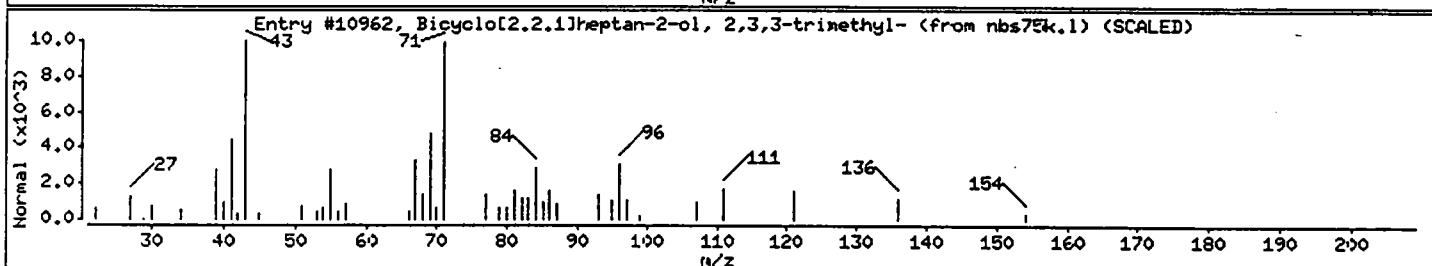
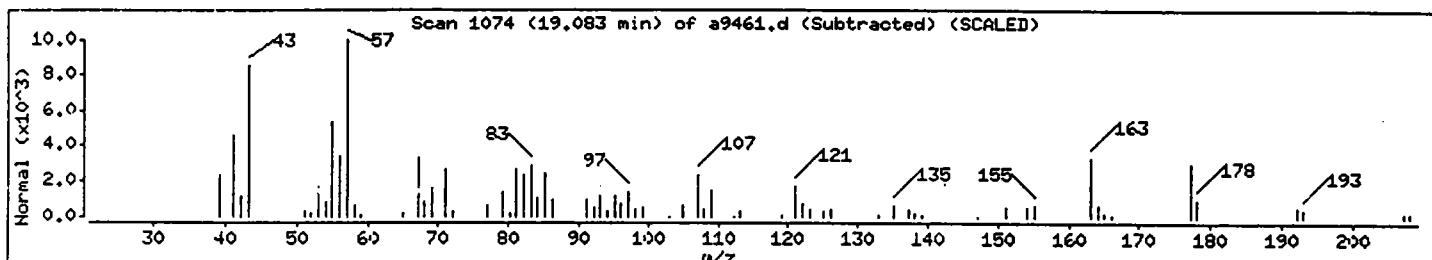
Sample Info: 96870;;11.8;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Bicyclo[2.2.1]heptan-2-ol, 2,3,3-trimethyl- (4R,4aR,5S)-5-isopropyl-4,4a-dimethyl-1,	465-31-6 0-00->	nbs75k.1 nbs75k.1	10962 24441.	22 22	C10H18O C15H26	154 206



Data File: /chem/VOAMS1.i /824CLOH/06-06-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: VOAMS1.i

Sample Info: 96870;;11.8;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

Unknown Alkane

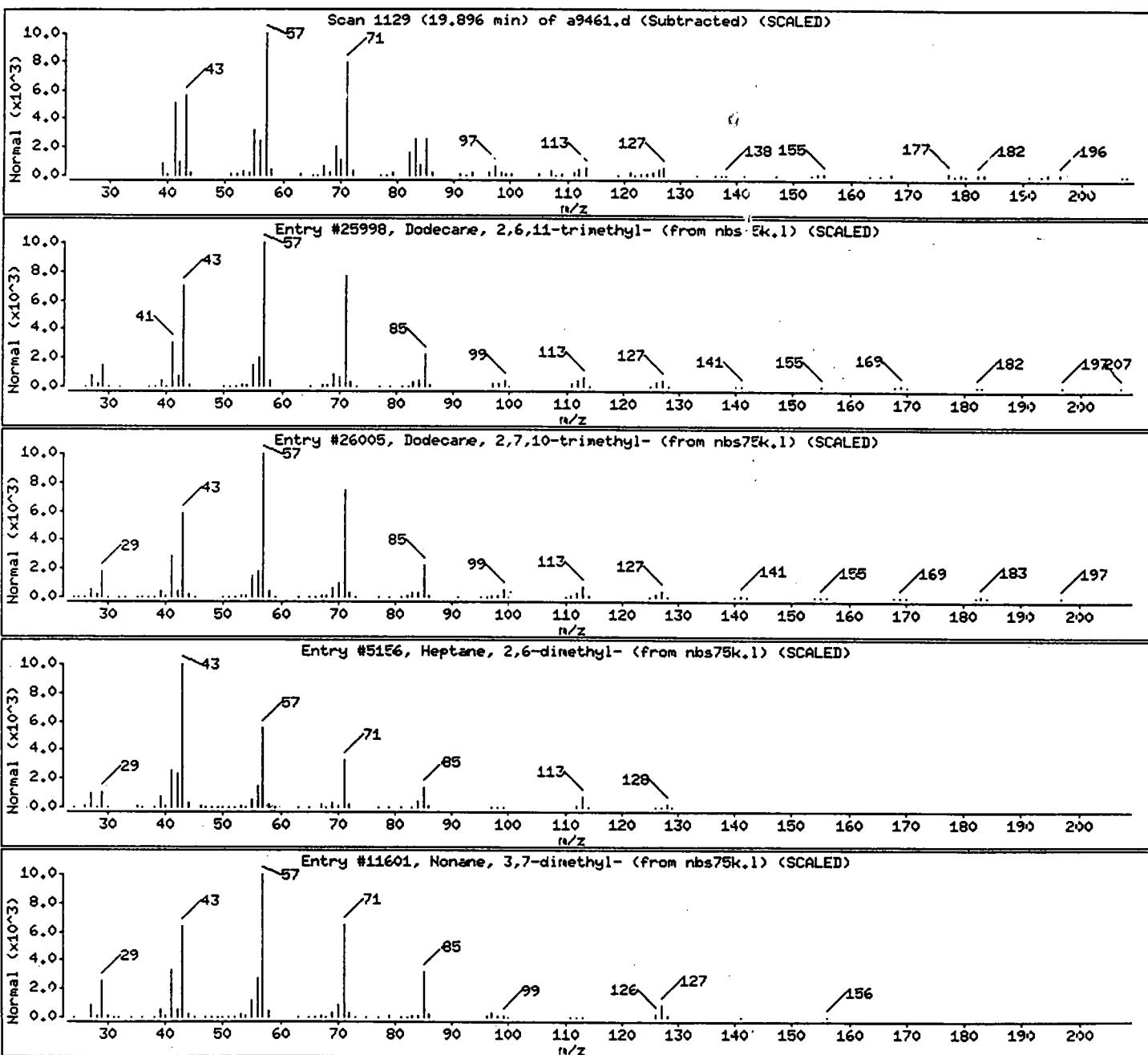
Dodecane, 2,6,11-trimethyl-

	CAS Number	Library	Entry	Quality	Formula	Weight
Dodecane, 2,6,11-trimethyl-	31295-56-4	nbs75k.1	25998	80	C15H32	212
Dodecane, 2,7,10-trimethyl-	74645-98-0	nbs75k.1	26005	80	C15H32	212
Heptane, 2,6-dimethyl-	1072-05-5	nbs75k.1	5156	72	C9H20	128
Nonane, 3,7-dimethyl-	17302-32-8	nbs75k.1	11601	64	C11H24	156

Dodecane, 2,7,10-trimethyl-

Heptane, 2,6-dimethyl-

Nonane, 3,7-dimethyl-



Data File: /chem/VOAMS1.i/824CLOH/06-C6-97/13jun97.b/a9461.d

Date : 13-JUN-97 12:18:00

Client ID: PX-5

Instrument: VOAMS1.i

Sample Info: 96870;;11.8;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match

Unknown Alkane

Tetradecane

CAS Number Library Entry Quality Formula Weight

Dodecane, 2,6,10-trimethyl-

629-59-4 nbs75k.1 69661 72 C14H30 198

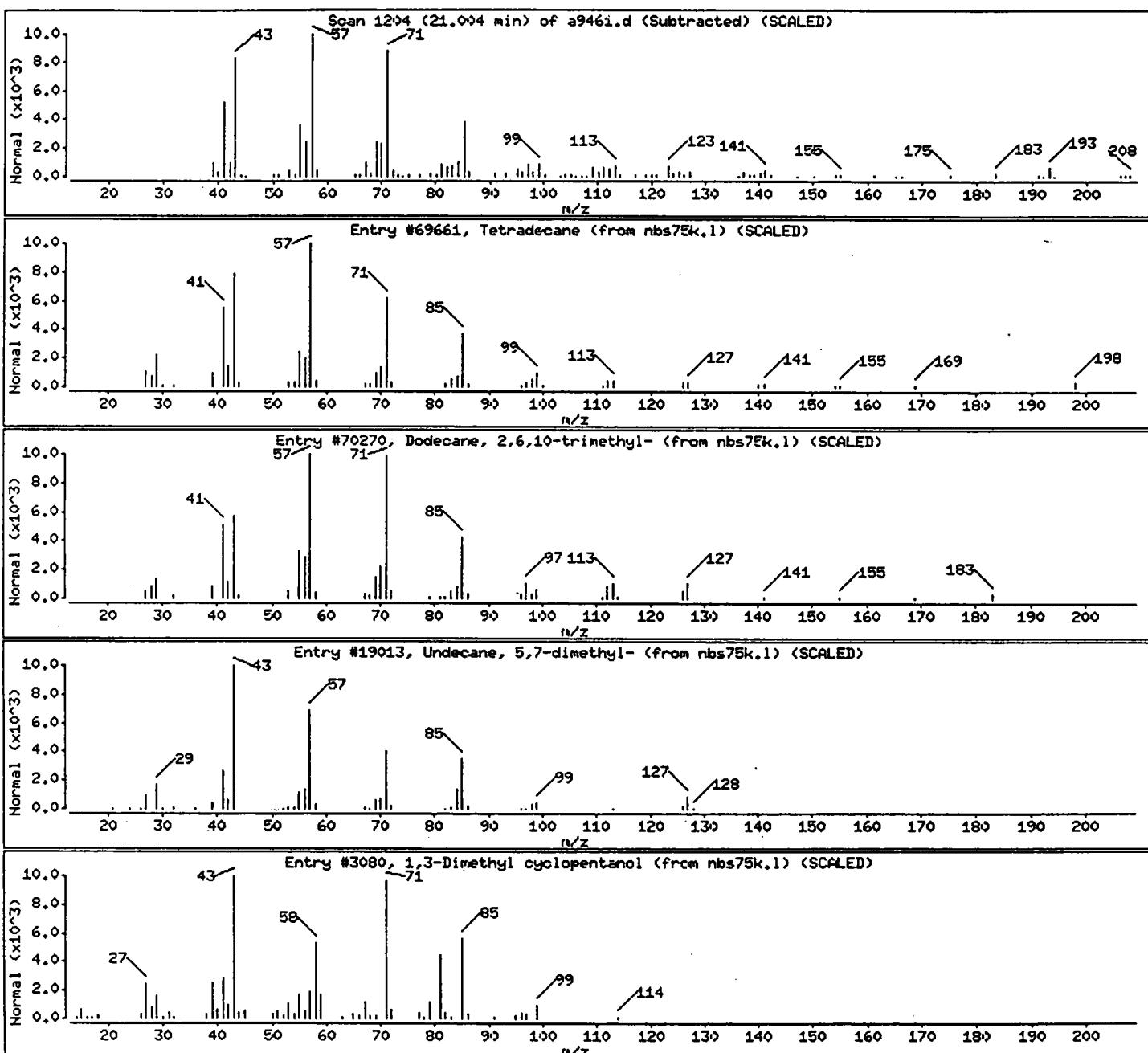
Undecane, 5,7-dimethyl-

3891-98-3 nbs75k.1 70270 72 C15H32 212

1,3-Dimethyl cyclopentanol

17312-83-3 nbs75k.1 19013 64 C13H28 184

19550-46-0 nbs75k.1 3080 53 C7H14O 114



Client ID: PX-5
Site: Ortho Diagnostics

Lab Sample No: 96870
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1500.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0
% Moisture: 12

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation Limit</u> <u>Units: ug/kg</u>
N-Nitrosodimethylamine	ND	370
bis(2-Chloroethyl)ether	ND	370
1,3-Dichlorobenzene	ND	370
1,4-Dichlorobenzene	ND	370
1,2-Dichlorobenzene	ND	370
bis(2-chloroisopropyl)ether	ND	370
N-Nitroso-di-n-propylamine	ND	370
Hexachloroethane	ND	370
Nitrobenzene	ND	370
Isophorone	ND	370
bis(2-Chloroethoxy)methane	ND	370
1,2,4-Trichlorobenzene	ND	370
Naphthalene	ND	19
Hexachlorobutadiene	ND	370
Hexachlorocyclopentadiene	ND	370
2-Chloronaphthalene	ND	370
Dimethylphthalate	ND	370
Acenaphthylene	ND	19
2,6-Dinitrotoluene	ND	370
Acenaphthene	ND	19
2,4-Dinitrotoluene	ND	370
Diethylphthalate	ND	370
4-Chlorophenyl-phenylether	ND	370
Fluorene	ND	19
N-Nitrosodiphenylamine	ND	370
4-Bromophenyl-phenylether	ND	370
Hexachlorobenzene	ND	370
Phenanthrene	ND	19
Anthracene	ND	19
Di-n-butylphthalate	ND	370
Fluoranthene	ND	19
Pyrene	ND	19
Benzidine	ND	750
Butylbenzylphthalate	ND	370

Client ID: PX-5
Site: Ortho Diagnostics

Lab Sample No: 96870
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1500.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0
% Moisture: 12

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270B

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
3,3'-Dichlorobenzidine	ND	750
Benzo(a)anthracene	ND	19
Chrysene	ND	19
bis(2-Ethylhexyl)phthalate	270 J	370
Di-n-octylphthalate	ND	370
Benzo(b)fluoranthene	ND	19
Benzo(k)fluoranthene	ND	19
Benzo(a)pyrene	ND	19
Indeno(1,2,3-cd)pyrene	ND	19
Dibenz(a,h)anthracene	ND	19
Benzo(g,h,i)perylene	ND	19

Client ID: PX-5
Site: Ortho Diagnostics

Lab Sample No: 96870
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1500.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0
% Moisture: 11.8

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Decane	12.56	1900	
2. C10H20 Cycloalkane	13.10	500	
3. Unknown Alkane	13.32	550	
4. C11H24 Alkane	13.43	680	
5. Unknown Alkane	13.51	540	
6. Undecane	13.87	2700	
7. Dodecane	15.00	640	
8. Unknown Alkane	15.73	550	
9. Unknown Alkane	16.73	1300	
10. Unknown Alkane	16.95	620	
11. Unknown Alkane	17.48	2300	
12. Unknown	17.80	730	
13. Unknown Alkane	19.01	710	
14. Unknown Alkane	19.46	1400	
15. Unknown	31.21	1200	
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

16320

Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d
Report Date: 20-Jun-97 09:26:03

Envirotech Research Inc.

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d
Lab Smp Id: 96870 Client Smp ID: PX-5
Inj Date : 19-JUN-97 22:17:00 T.C.
Operator : BNAMS3 Inst ID: BNAMS3.i
Smp Info : 96870;30;2;1;11.8
Misc Info : V393;PPBN+15;3444;114
Comment :
Method : /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/8270b.m
Meth Date : 20-Jun-97 06:39:03 jeri Quant Type: ISTD
Cal Date : 02-JUN-97 16:23:00 Cal File: t1203.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.20 Compound Sublist: PPBNb.sub
Procesing Host: hp735

Concentration Formula: Uf*1000*Vt/ (Ws*(100-M)/10⁶)

Name	Value	Description
Uf	1.000	ng unit correction factor
Vt	2.000	Volume of final extract (ml)
Ws	30.000	Weight of sample extracted (g)
M	11.800	% Moisture

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/ml)	FINAL (ug/Kg)
* 79 1,4-Dichlorobenzene-d4	152	12.848	12.845	(1.000)	123584		40	
\$ 76 Nitrobenzene-d5 (SUR)	82	13.812	13.815	(0.919)	269092		41	3100
* 80 Naphthalene-d8	136	15.033	15.036	(1.000)	545953		40	
\$ 77 2-Fluorobiphenyl (SUR)	172	16.820	16.824	(0.937)	327855		45	3400
* 82 Acenaphthene-d10	164	17.956	17.954	(1.000)	212553		40	
* 83 Phenanthrene-d10	188	20.414	20.414	(1.000)	323273		40	
\$ 78 Terphenyl-d14 (SUR)	244	23.032	23.026	(0.929)	307838		48	3600
* 81 Chrysene-d12	240	24.794	24.796	(1.000)	261749		40	
63 bis(2-Ethylhexyl)phthalate	149	24.740	24.736	(0.998)	29396	3.5	270(a)	
* 84 Perylene-d12	264	28.127	28.110	(1.000)	255778		40	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Sample Info: 96870;30;2;1;11.8

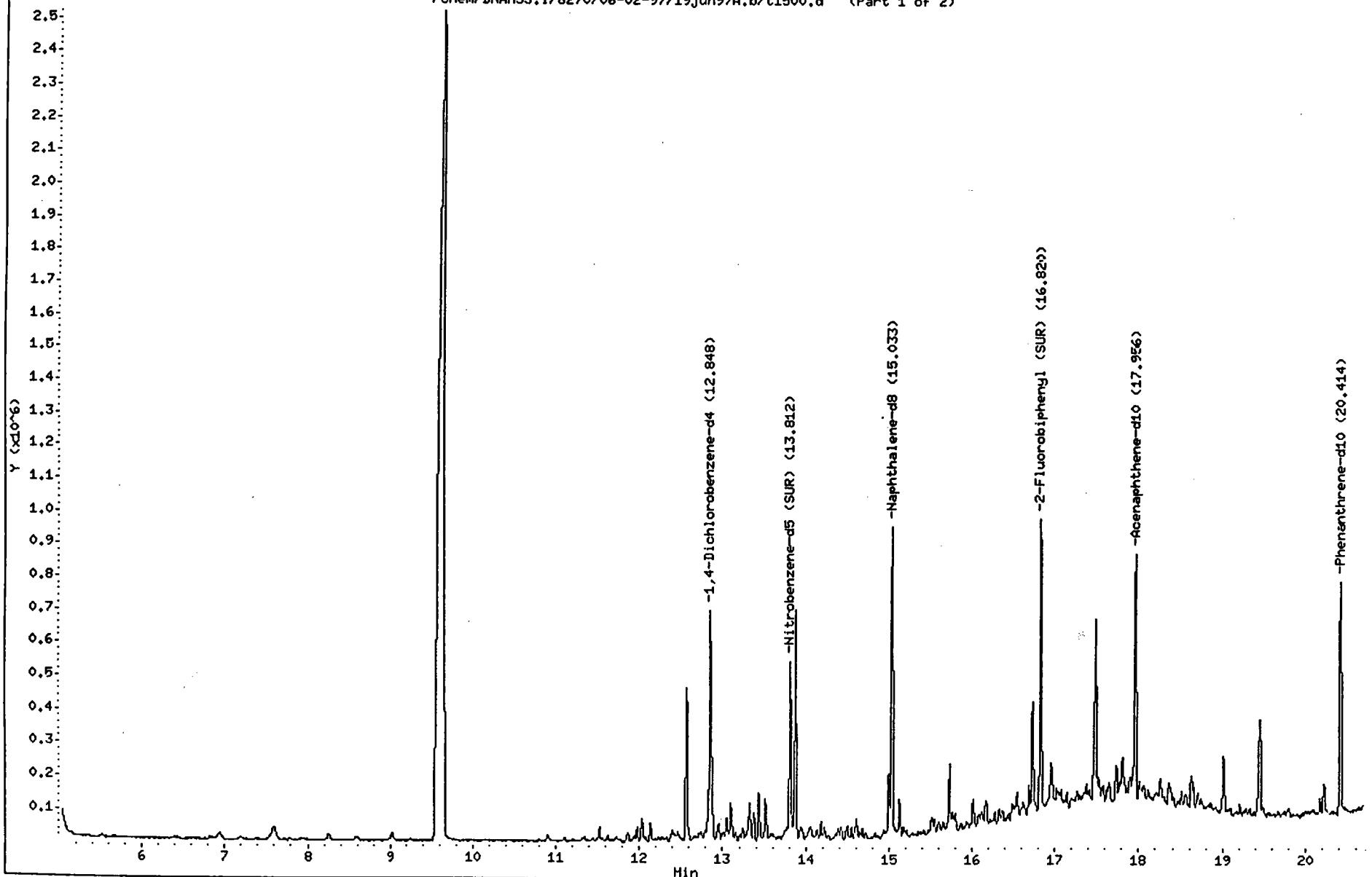
Column phase: DB-5

Instrument: BNAMS3.i

Operator: BNAMS3

Column diameter: 0.25

/chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d (Part 1 of 2)



Data File: /chem/BNAHS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-6

Sample Info: 96870;30;2;1;11.8

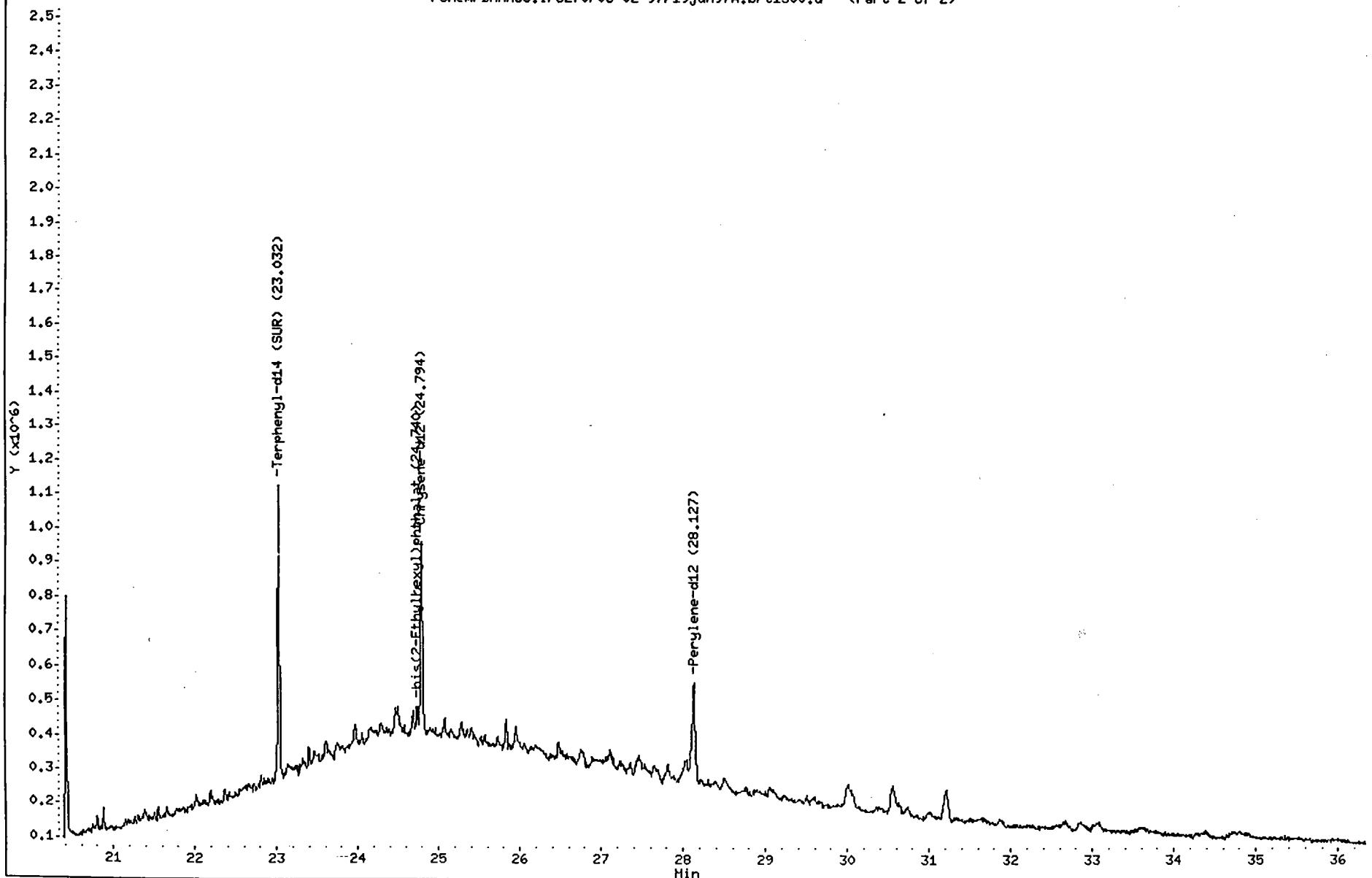
Column phase: DB-5

Instrument: BNAHS3.i

Operator: BNAHS3

Column diameter: 0.25

/chem/BNAHS3.i/8270/06-02-97/19jun97A.b/t1500.d (Part 2 of 2)



Data File: /chem/BNAMS3.i/9270/06-02-97/19jun97a.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

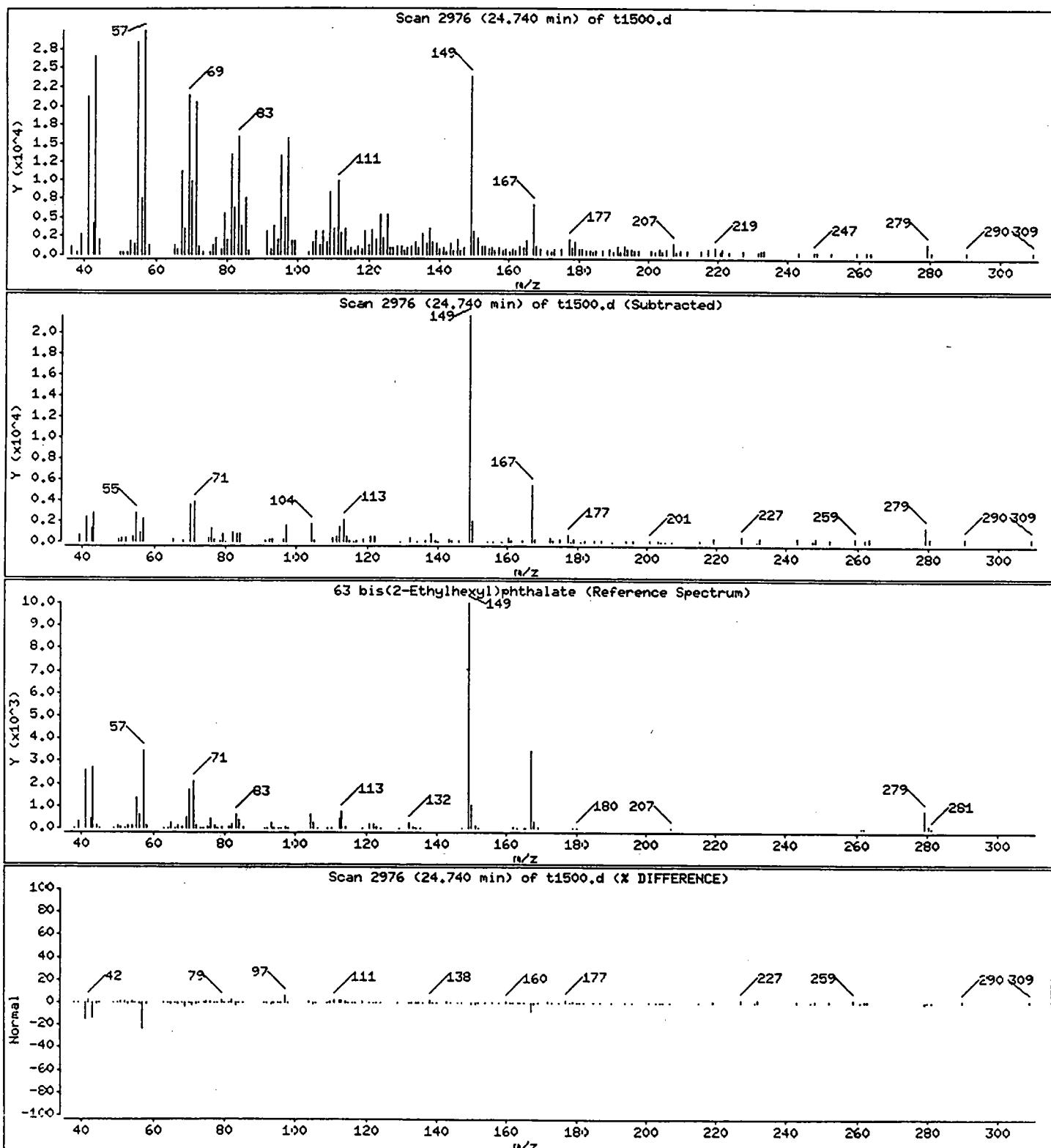
Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

63 bis(2-Ethylhexyl)phthalate



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

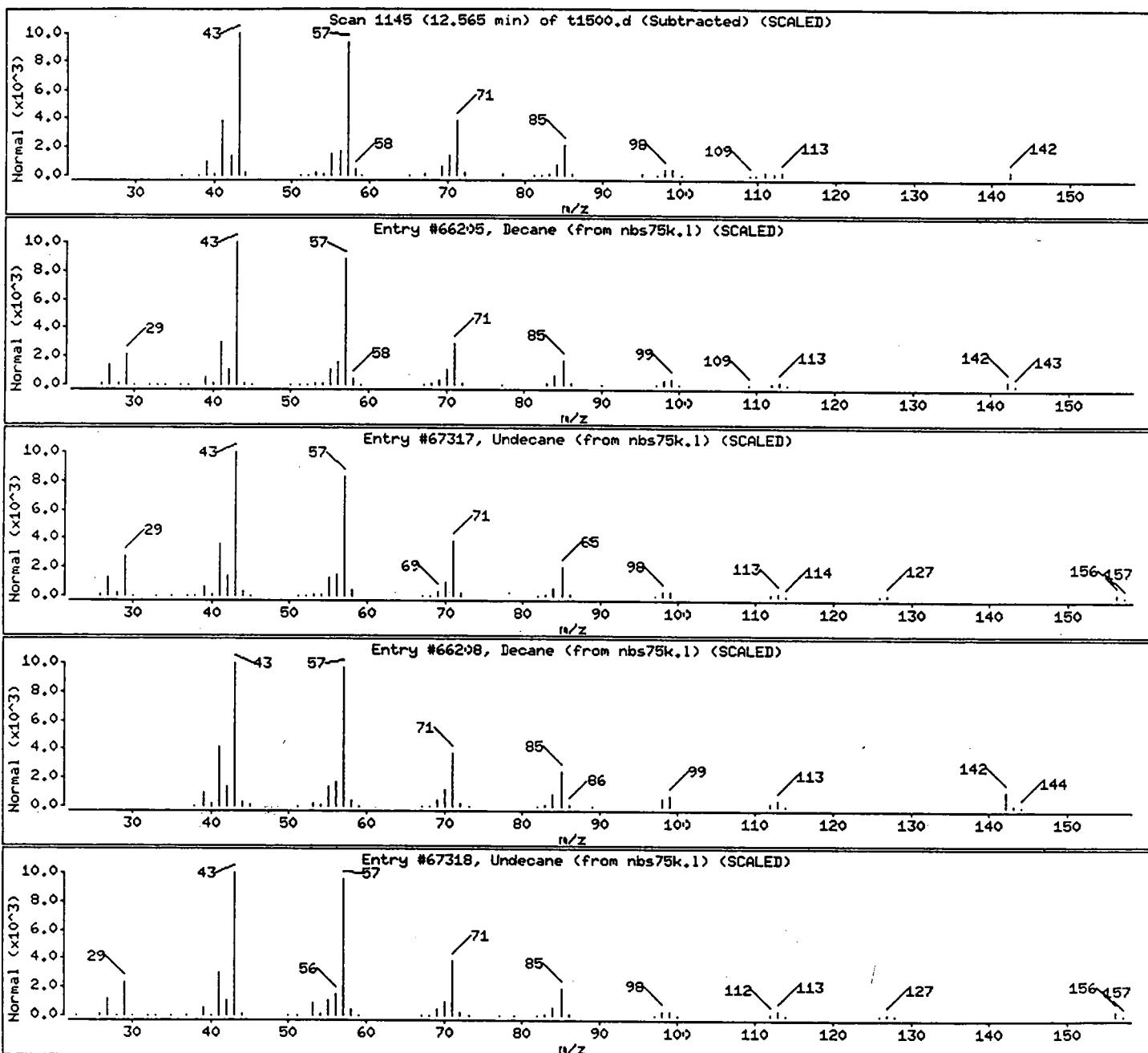
Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Hatch	CAS Number	Library	Entry	Quality	Formula	Weight
Decane	124-18-5	nbs75k.1	66205	91	C10H22	142
Undecane	1120-21-4	nbs75k.1	67317	90	C11H24	156
Decane	124-18-5	nbs75k.1	66208	90	C10H22	142
Undecane	1120-21-4	nbs75k.1	67318	90	C11H24	156



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

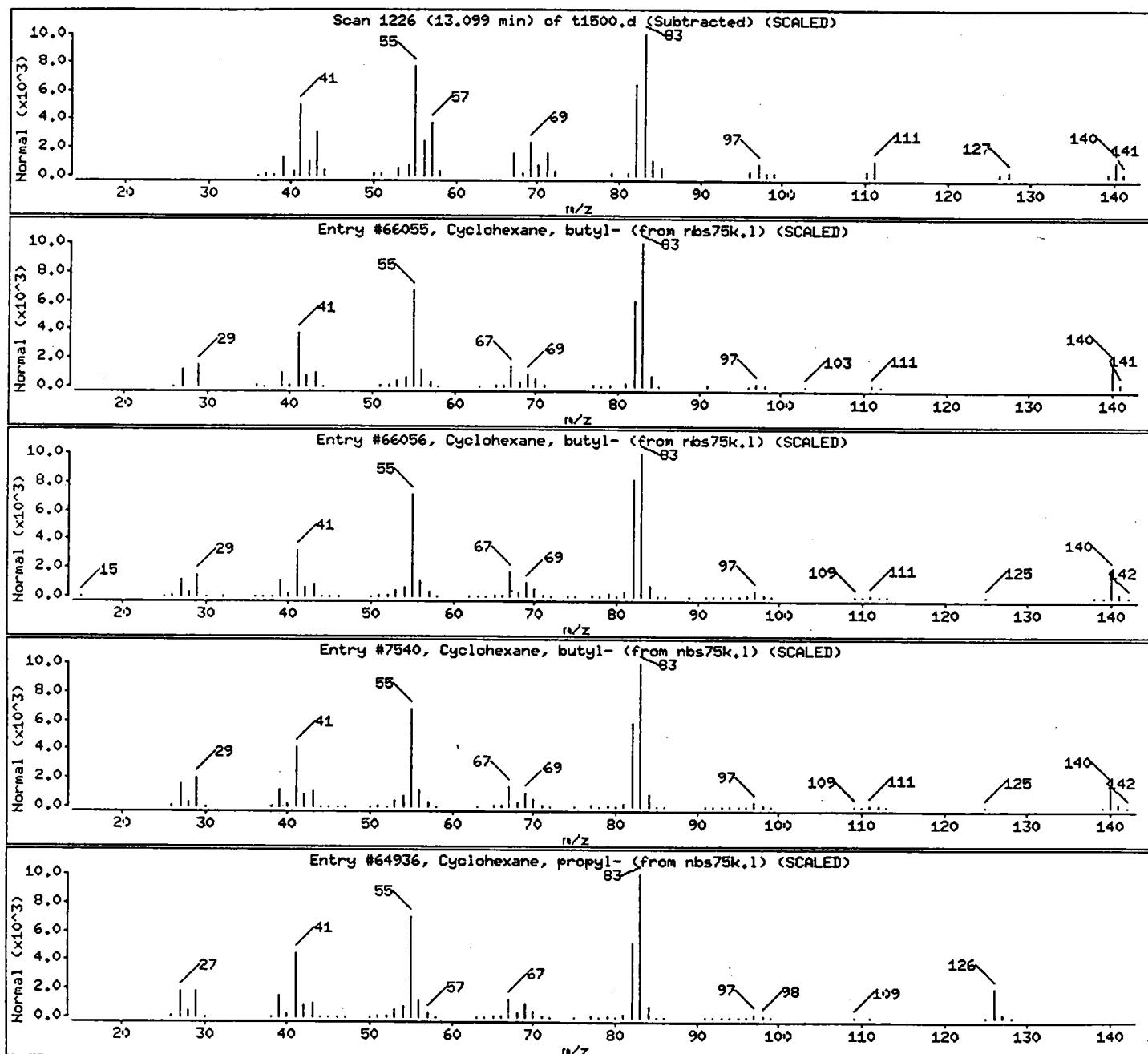
Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

CAS Number Library Entry Quality Formula Weight

C10H20 Cycloalkane	nbs75k.1	66055	72	C10H20	140	
Cyclohexane, butyl-	1678-93-9	nbs75k.1	66056	72	C10H20	140
Cyclohexane, butyl-	1678-93-9	nbs75k.1	7540	72	C10H20	140
Cyclohexane, propyl-	1678-92-8	nbs75k.1	64936	64	C9H18	126



Data File: /chem/BNAMS3.i/9270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

Sample Info: 96870;30;2;1;11.8

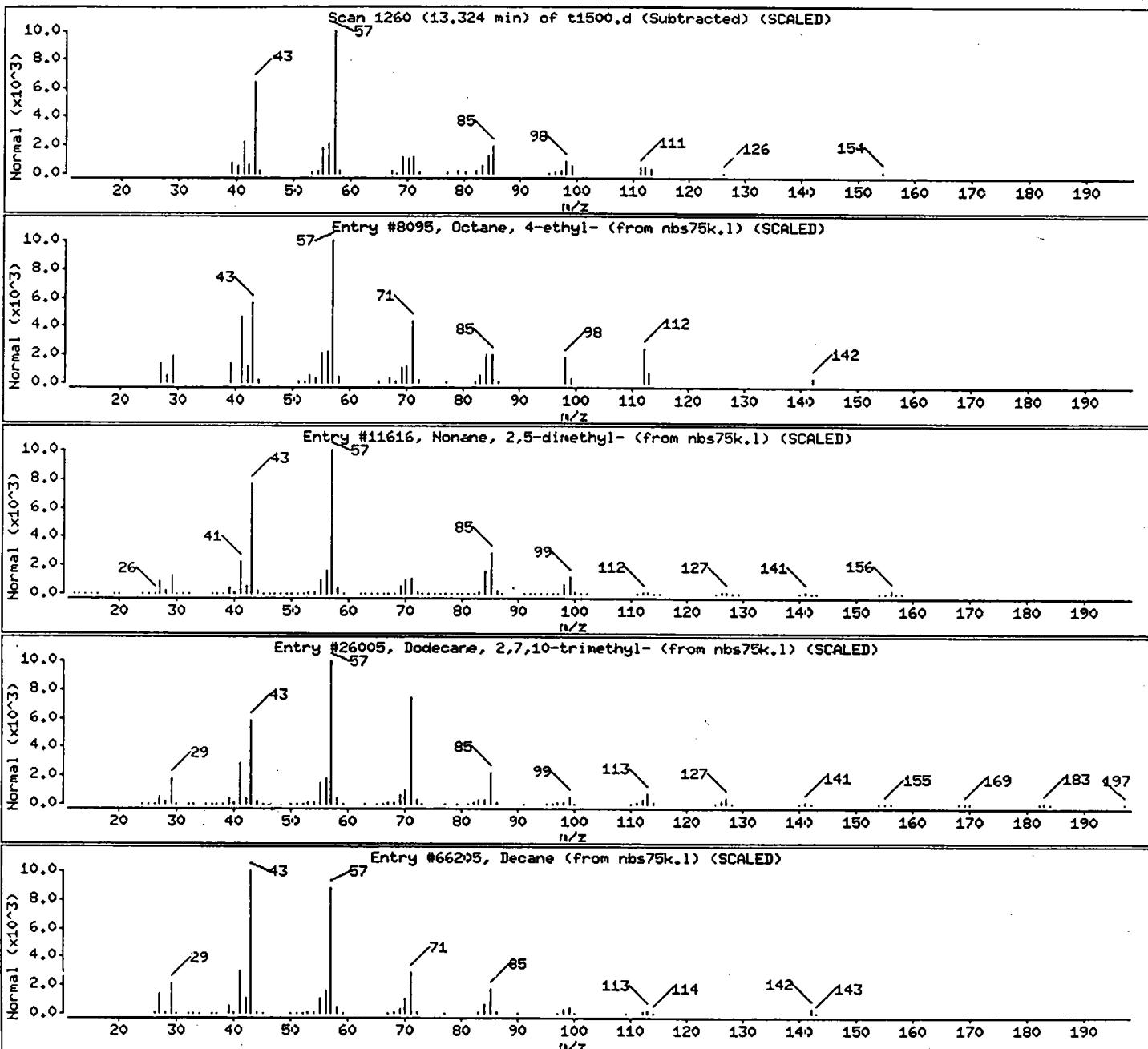
Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Alkane						
Octane, 4-ethyl-	15869-86-0	nbs75k.1	8095	64	C10H22	142
Nonane, 2,5-dimethyl-	17302-27-1	nbs75k.1	11616	59	C11H24	156
Dodecane, 2,7,10-trimethyl-	74645-98-0	nbs75k.1	26005	59	C15H32	212
Decane	124-18-5	nbs75k.1	66205	45	C10H22	142



Data File: /chem/BNAMS3.i/9270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

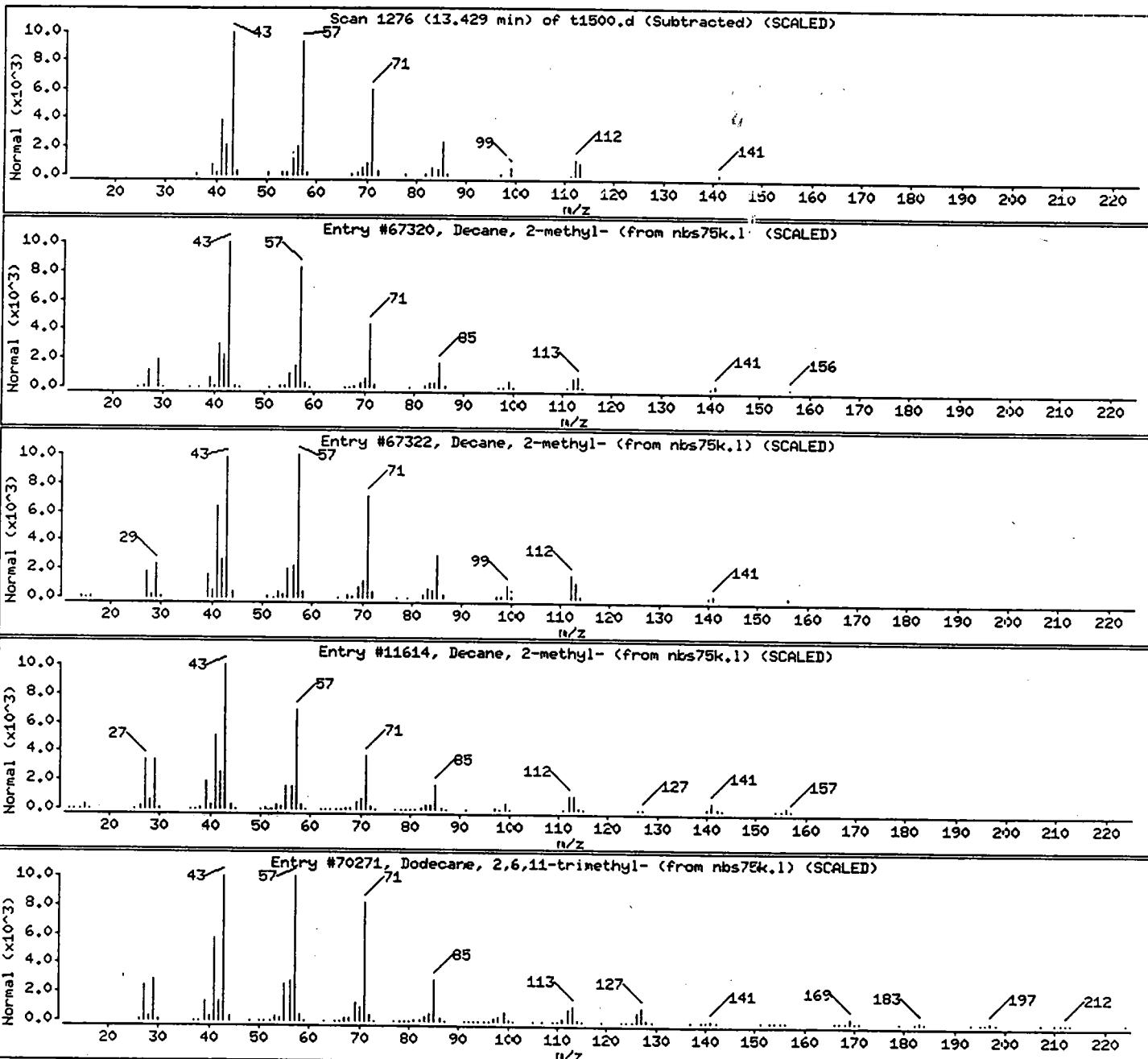
C11H24 Alkane

Decane, 2-methyl-

Library	CAS Number	Entry	Quality	Formula	Weight
nbs75k.1	6975-98-0	67320	90	C11H24	156
nbs75k.1	6975-98-0	67322	83	C11H24	156
nbs75k.1	6975-98-0	11614	83	C11H24	156
nbs75k.1	31295-56-4	70271	78	C15H32	212

Decane, 2-methyl-

Dodecane, 2,6,11-trimethyl-



Data File: /chem/BNAHMS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAHMS3.i

Sample Info: 96870;30;2;1;11.8

Operator: BNAHMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

Unknown Alkane

Decane, 3-methyl-

CAS Number Library Entry Quality Formula Weight

Octane, 3-ethyl-2,7-dimethyl-

13151-34-3 nbs75k.1 67314 72 C11H24 156

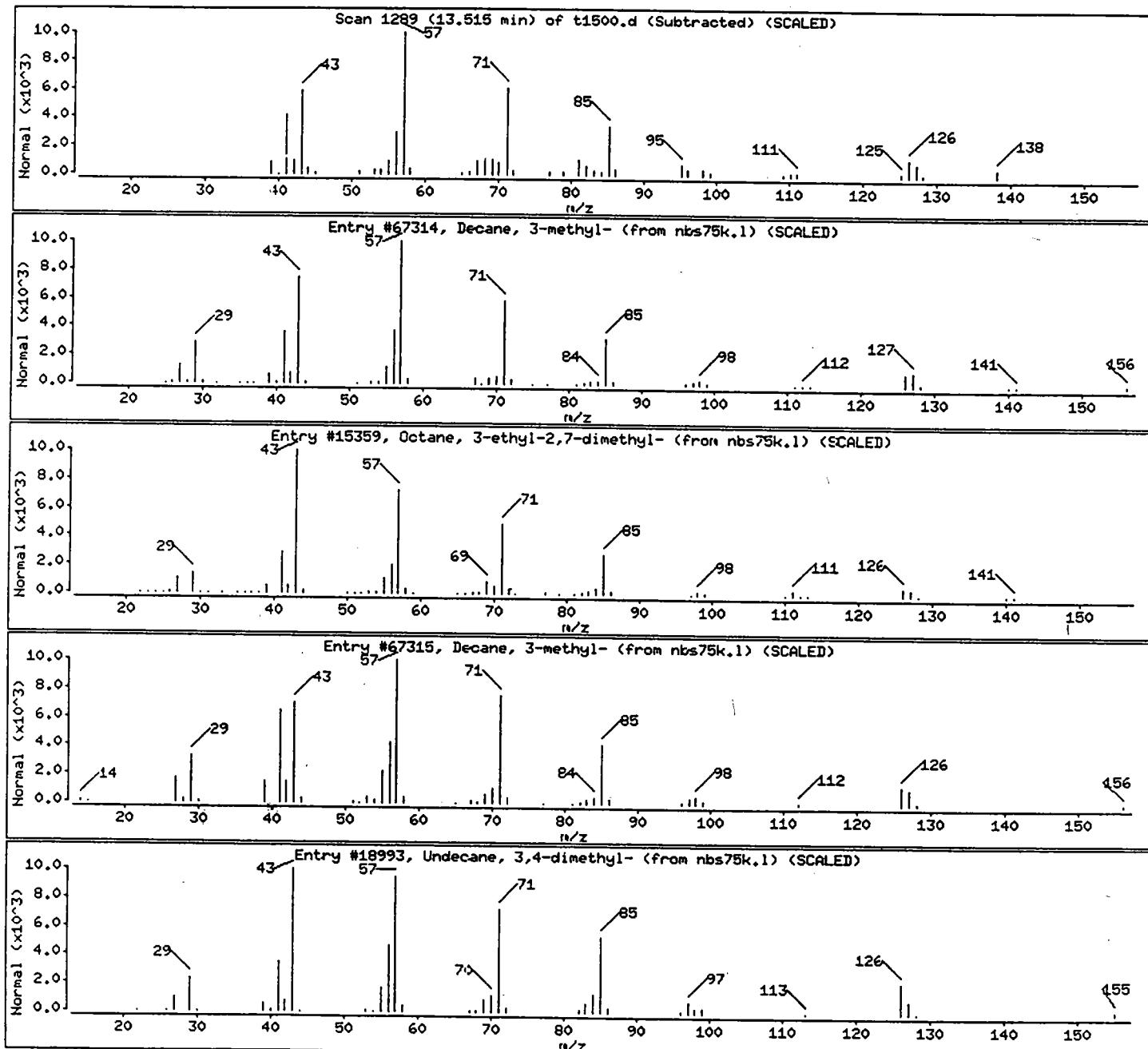
Decane, 3-methyl-

62183-55-5 nbs75k.1 15359 72 C12H26 170

Undecane, 3,4-dimethyl-

13151-34-3 nbs75k.1 67315 72 C11H24 156

17312-78-6 nbs75k.1 18993 64 C13H28 184



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

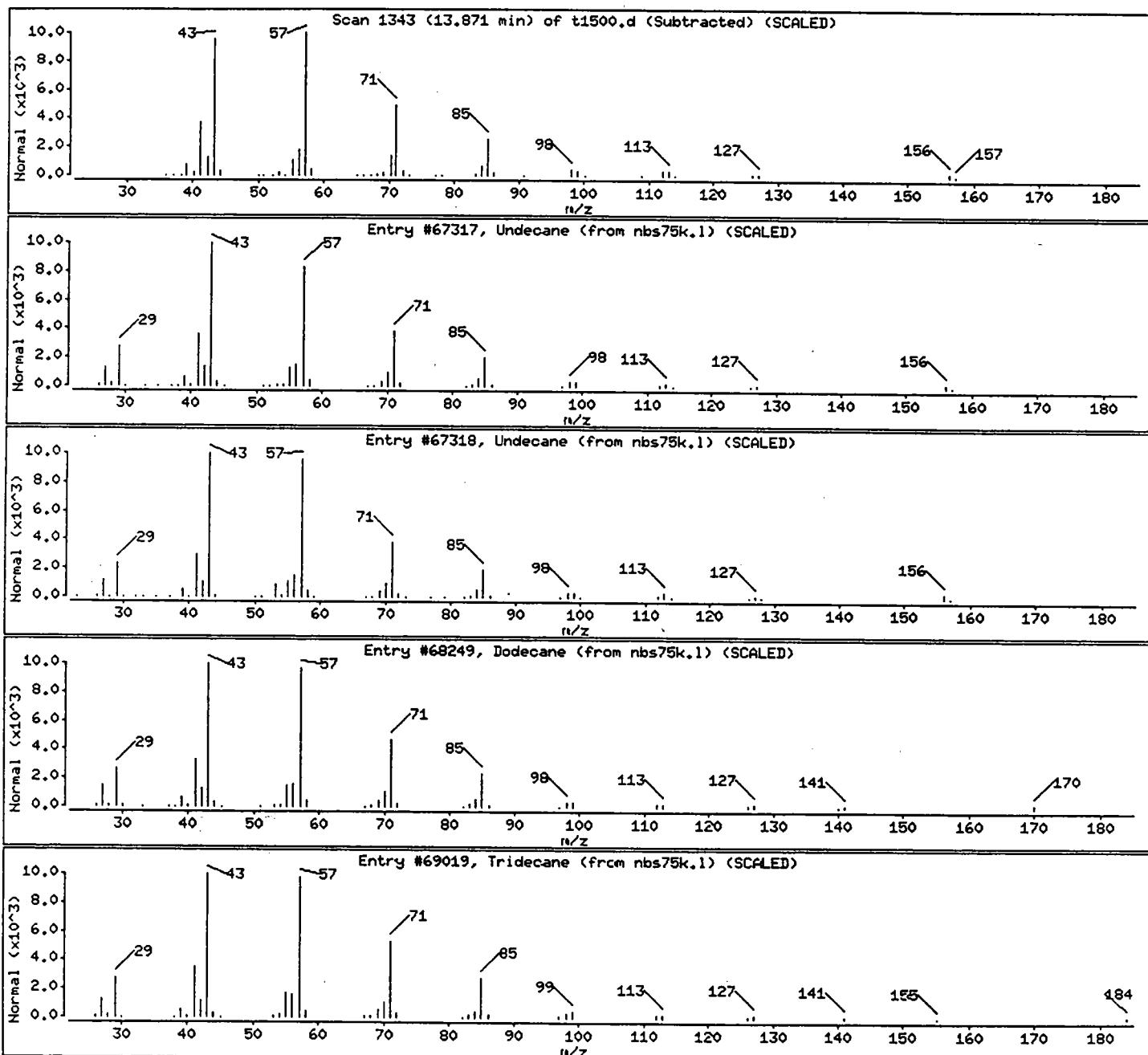
Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Undecane	1120-21-4	nbs75k.1	67317	95	C11H24	156
Undecane	1120-21-4	nbs75k.1	67318	95	C11H24	156
Dodecane	112-40-3	nbs75k.1	68249	90	C12H26	170
Tridecane	629-50-5	nbs75k.1	69019	90	C13H28	184



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

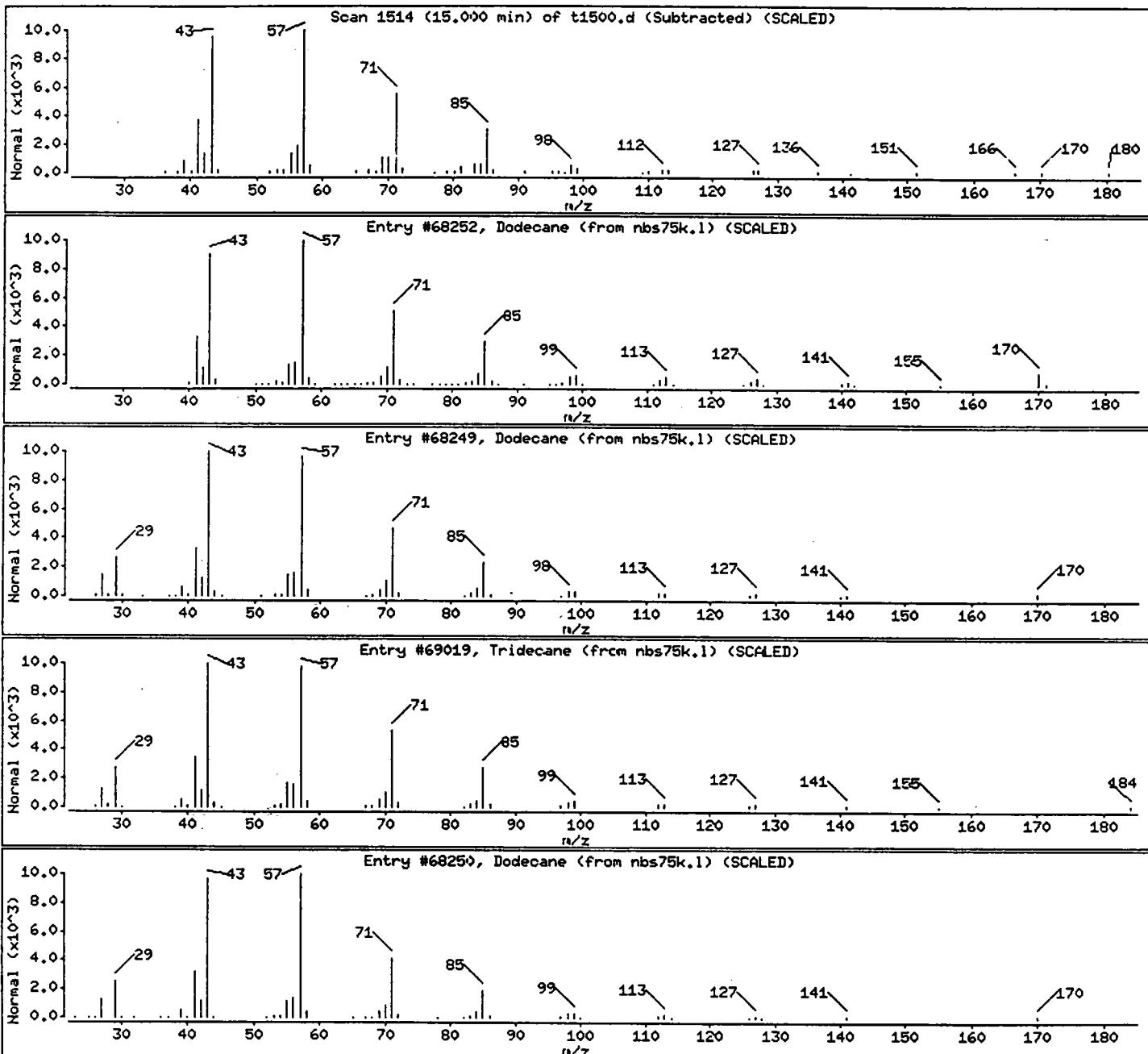
Column phase: DB-5

Column diameter: 0.25

Library Search Compound Hatch

CAS Number Library Entry Quality Formula Weight

Dodecane	112-40-3	nbs75k.1	68252	90	C12H26	170
Dodecane	112-40-3	nbs75k.1	68249	90	C12H26	170
Tridecane	629-50-5	nbs75k.1	69019	86	C13H28	184
Dodecane	112-40-3	nbs75k.1	68250	81	C12H26	170



Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAHS3.i

Sample Info: 96870;30;2;1;11.8

Operator: BNAHS3

Column phase: DB-5

Column diameter: 0.25

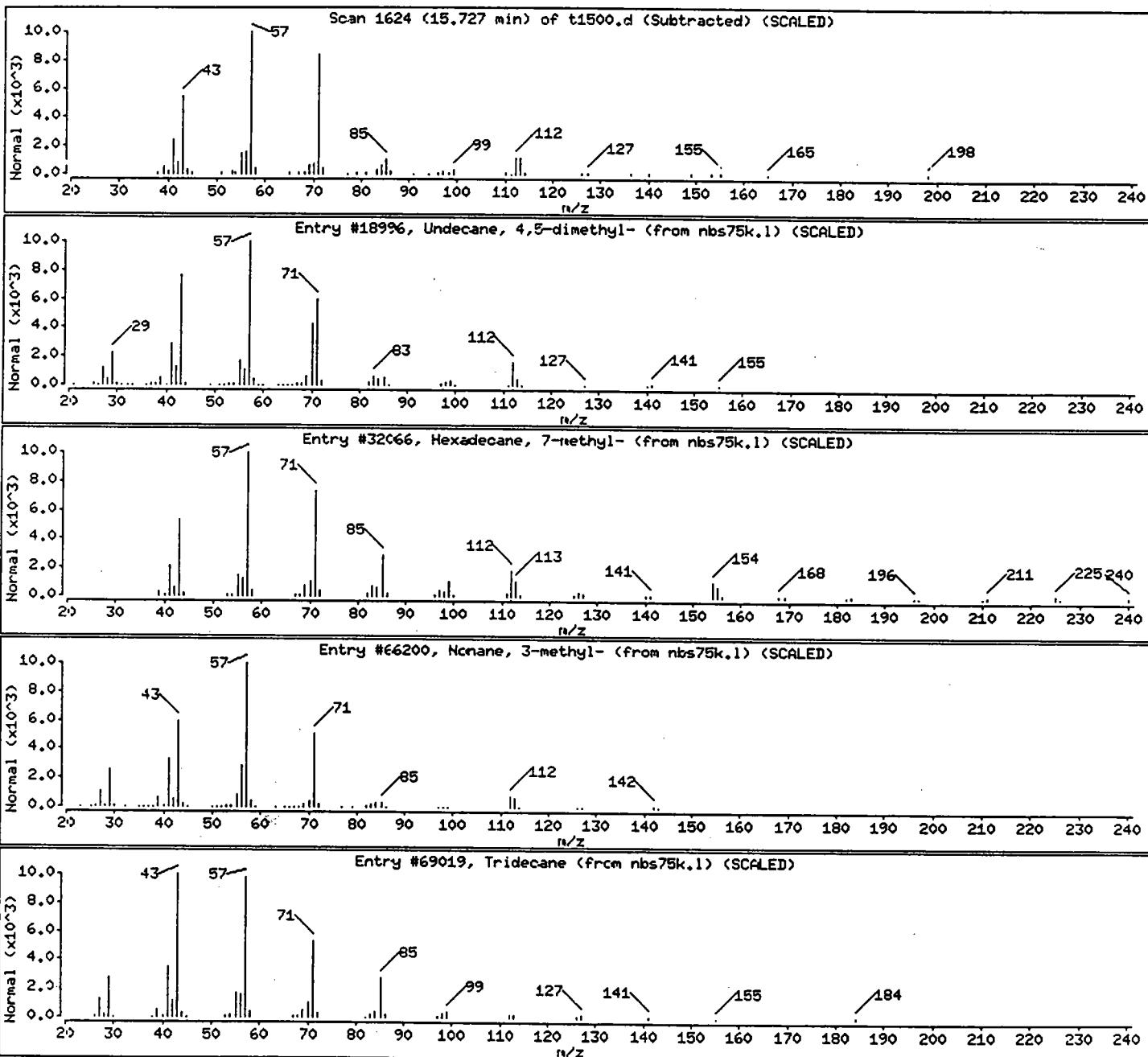
Library Search Compound Match

Unknown Alkane

Undecane, 4,5-dimethyl-

CAS Number Library Entry Quality Formula Weight

17312-79-7	nbs75k.1	18996	78	C13H28	184
26730-20-1	nbs75k.1	32066	78	C17H36	240
5911-04-6	nbs75k.1	66200	59	C10H22	142
629-50-5	nbs75k.1	69019	59	C13H28	184



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

Unknown Alkane

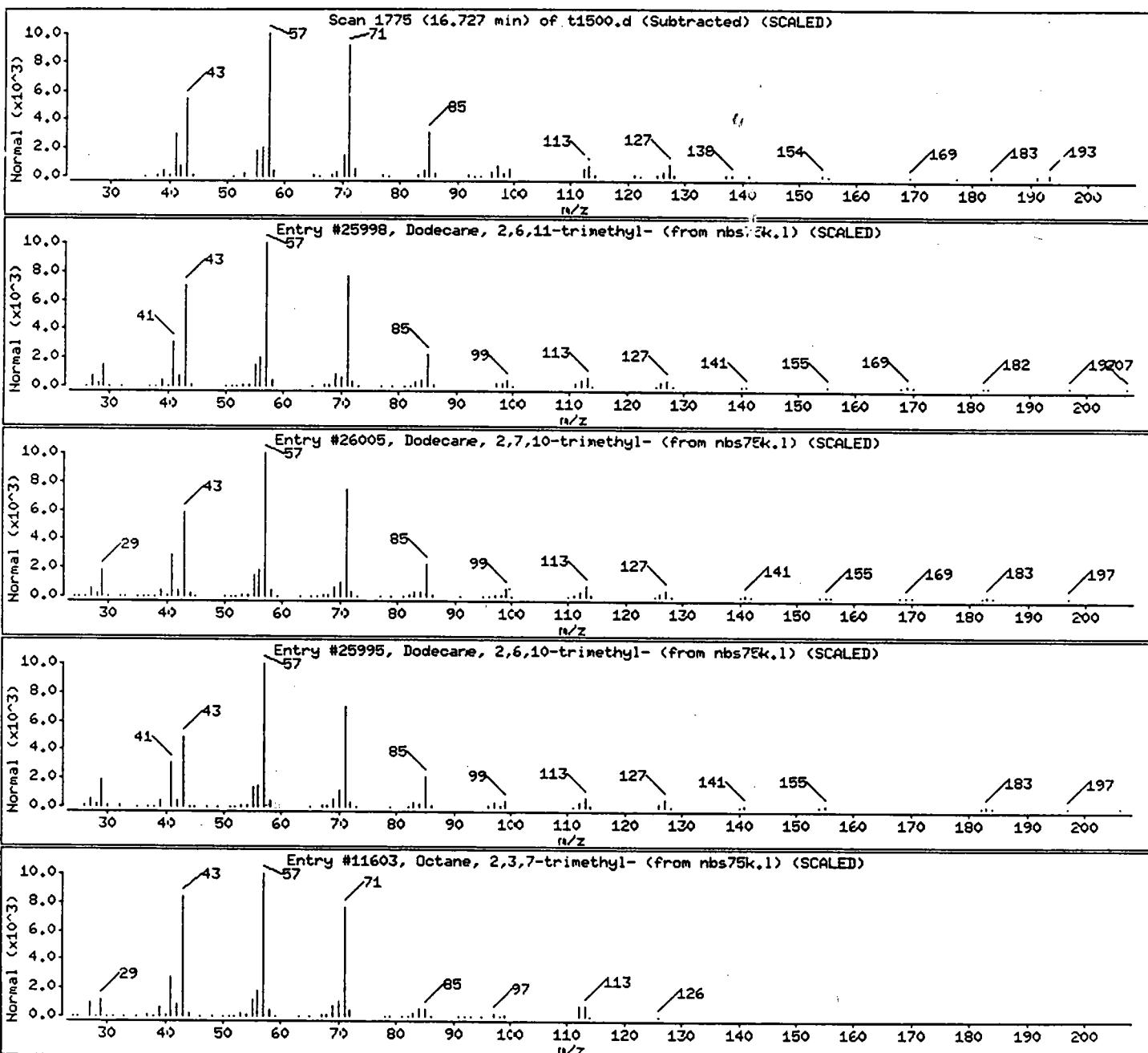
Dodecane, 2,6,11-trimethyl-

Library	CAS Number	Entry	Quality	Formula	Weight
nbs75k.1	31295-56-4	25998	90	C15H32	212
nbs75k.1	74545-98-0	26005	90	C15H32	212
nbs75k.1	3891-98-3	25995	80	C15H32	212
nbs75k.1	62016-34-6	11603	64	C11H24	156

Dodecane, 2,7,10-trimethyl-

Dodecane, 2,6,10-trimethyl-

Octane, 2,3,7-trimethyl-



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

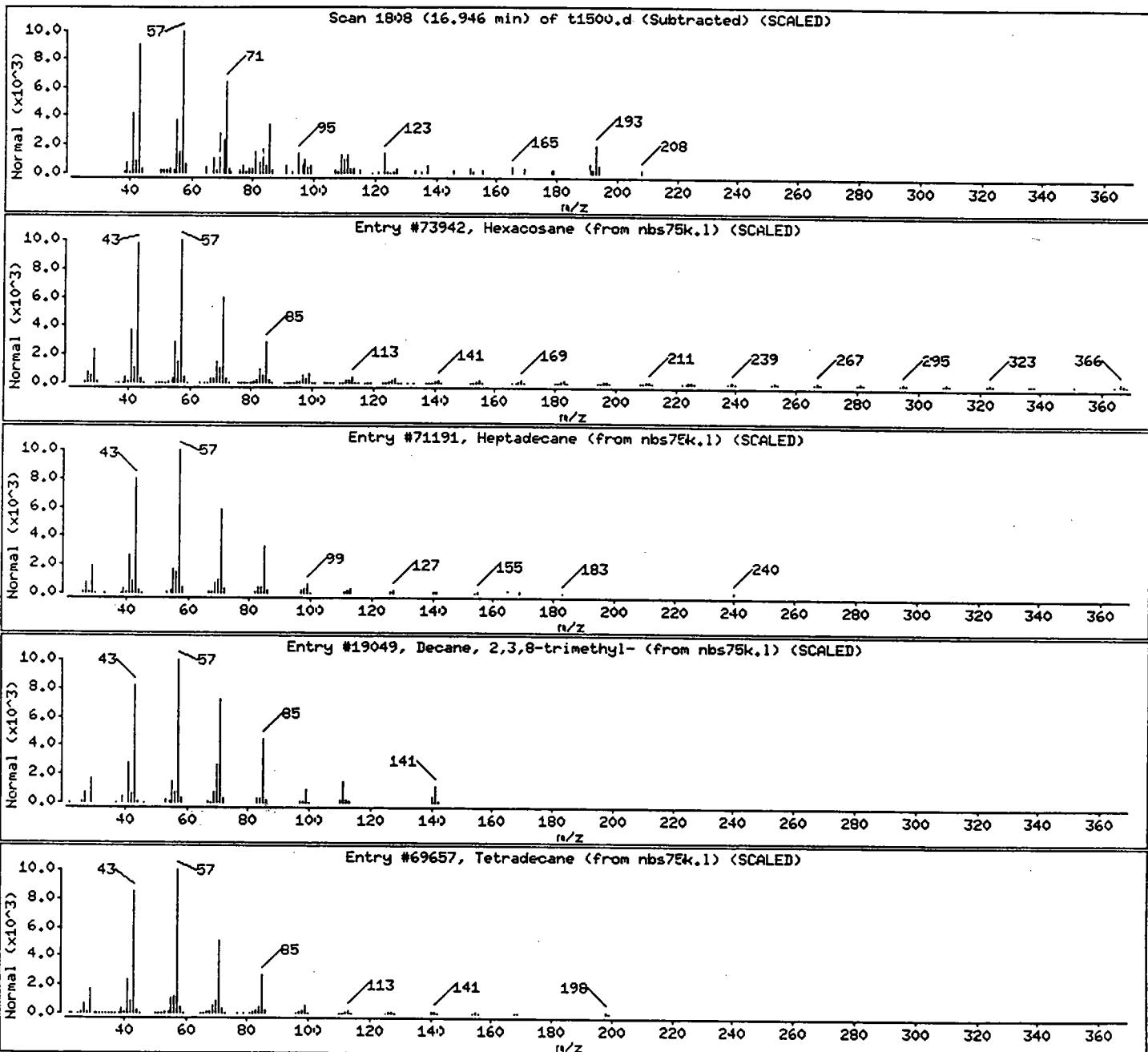
Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

Unknown Alkane

	CAS Number	Library	Entry	Quality	Formula	Weight
Hexacosane	630-01-3	nbs75k.1	73942	43	C26H54	366
Heptadecane	629-78-7	nbs75k.1	71191	38	C17H36	240
Decane, 2,3,8-trimethyl-	62238-14-6	nbs75k.1	19049	38	C13H28	184
Tetradecane	629-59-4	nbs75k.1	69657	38	C14H30	198



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

Unknown Alkane

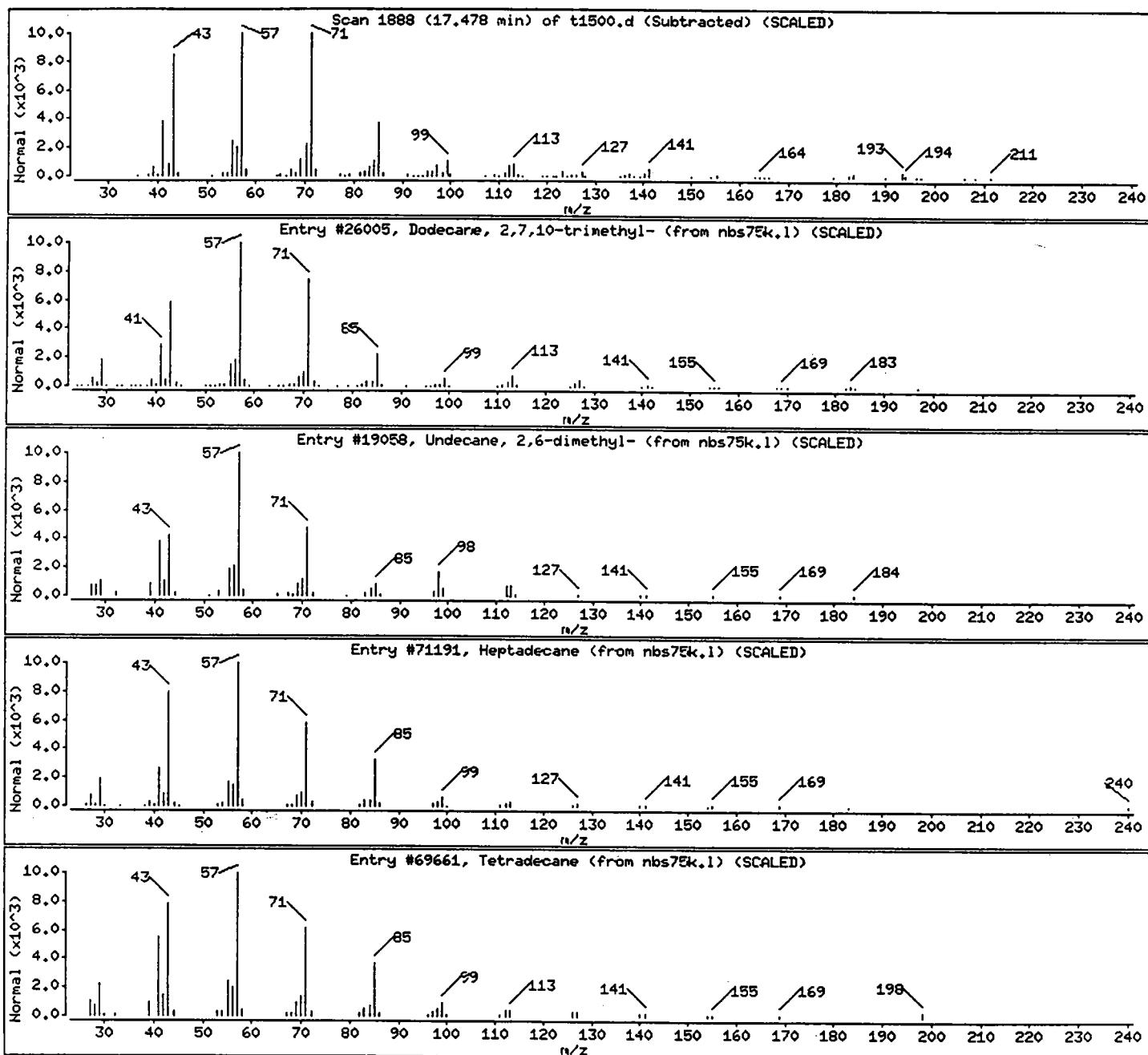
Dodecane, 2,7,10-trimethyl-

CAS Number	Library	Entry	Quality	Formula	Weight
74645-98-0	nbs75k.1	26005	72	C15H32	212
17301-23-4	nbs75k.1	19058	52	C13H28	184
629-78-7	nbs75k.1	71191	50	C17H36	240
629-59-4	nbs75k.1	69661	50	C14H30	198

Undecane, 2,6-dimethyl-

Heptadecane

Tetradecane



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97a.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

Column phase: DB-5

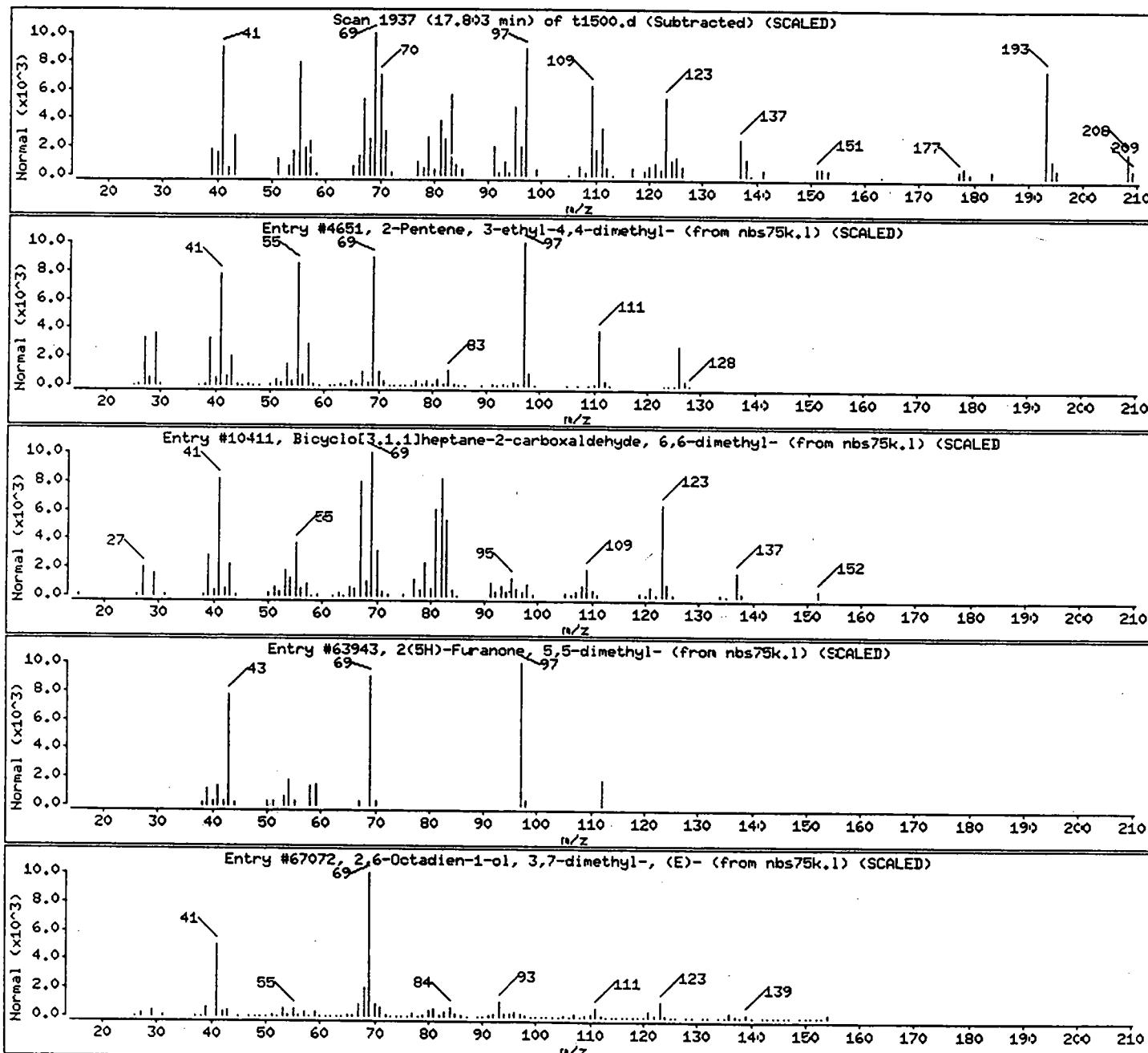
Column diameter: 0.25

Library Search Compound Match

Unknown

2-Pentene, 3-ethyl-4,4-dimethyl-
Bicyclo[3.1.1]heptane-2-carboxaldehyde,
2(5H)-Furanone, 5,5-dimethyl-
2,6-Octadien-1-ol, 3,7-dimethyl-, (E)-

CAS Number	Library	Entry	Quality	Formula	Weight
53907-59-8	nbs75k.1	4651	27	C9H18	126
4764-14-1	nbs75k.1	10411	25	C10H16O	152
20019-64-1	nbs75k.1	63943	25	C6H8O2	112
106-24-1	nbs75k.1	67072	22	C10H18O	154



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

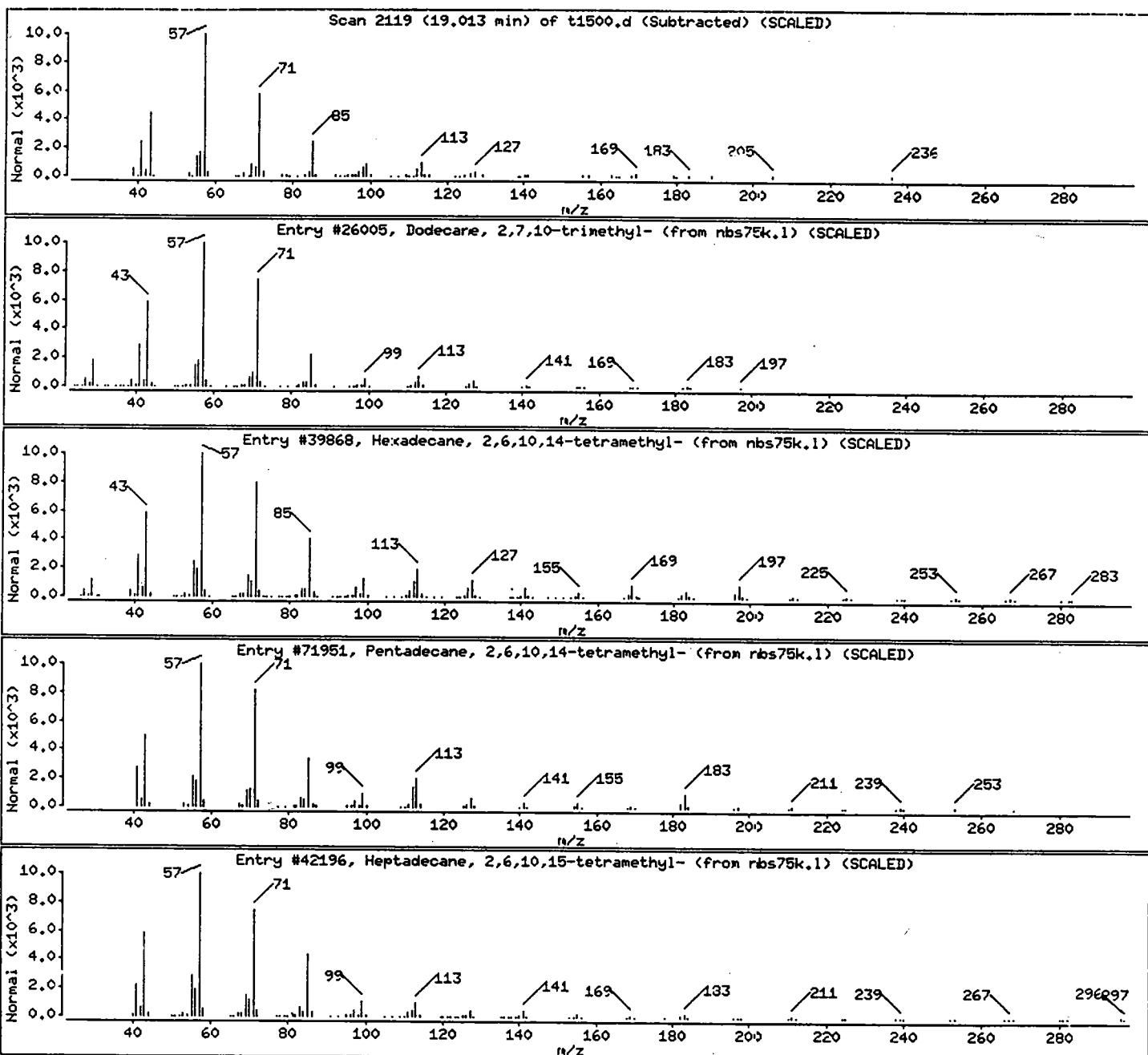
Column phase: DB-5

Column diameter: 0.25

Library Search Compound Match

Unknown Alkane

	CAS Number	Library	Entry	Quality	Formula	Weight
Dodecane, 2,7,10-trimethyl-	74645-98-0	nbs75k.1	26005	86	C15H32	212
Hexadecane, 2,6,10,14-tetramethyl-	638-36-8	nbs75k.1	39868	83	C20H42	262
Pentadecane, 2,6,10,14-tetramethyl-	1921-70-6	nbs75k.1	71951	80	C19H40	268
Heptadecane, 2,6,10,15-tetramethyl-	54833-48-6	nbs75k.1	42196	72	C21H44	296



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Hatch

Unknown Alkane

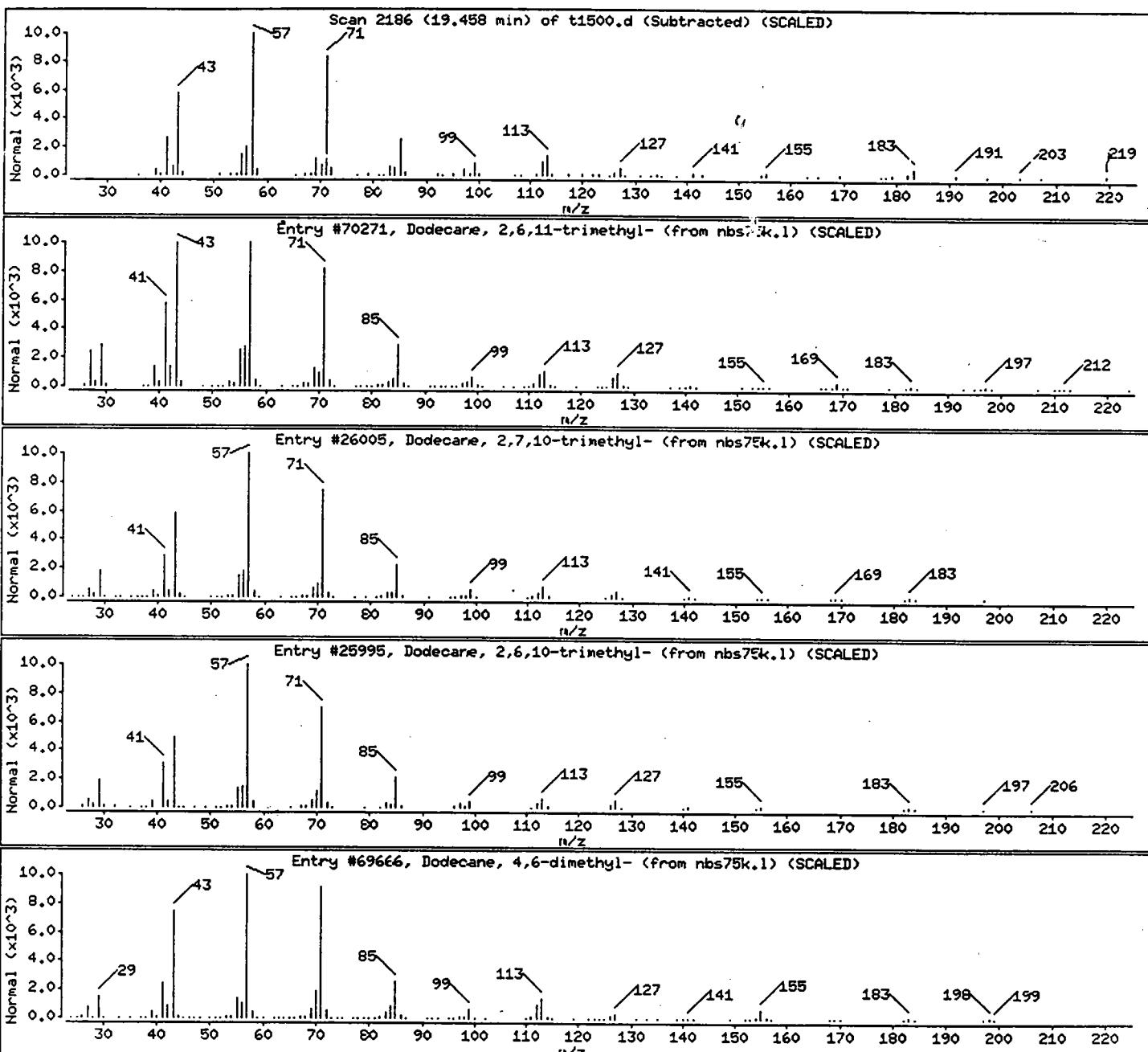
Dodecane, 2,6,11-trimethyl-

Library	CAS Number	Entry	Quality	Formula	Weight
nbs75k.1	31295-56-4	70271	86	C15H32	212
nbs75k.1	74645-98-0	26005	80	C15H32	212
nbs75k.1	3891-98-3	25995	78	C15H32	212
nbs75k.1	61141-72-8	69666	72	C14H30	198

Dodecane, 2,7,10-trimethyl-

Dodecane, 2,6,10-trimethyl-

Dodecane, 4,6-dimethyl-



Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1500.d

Date : 19-JUN-97 22:17:00

Client ID: PX-5

Instrument: BNAMS3.i

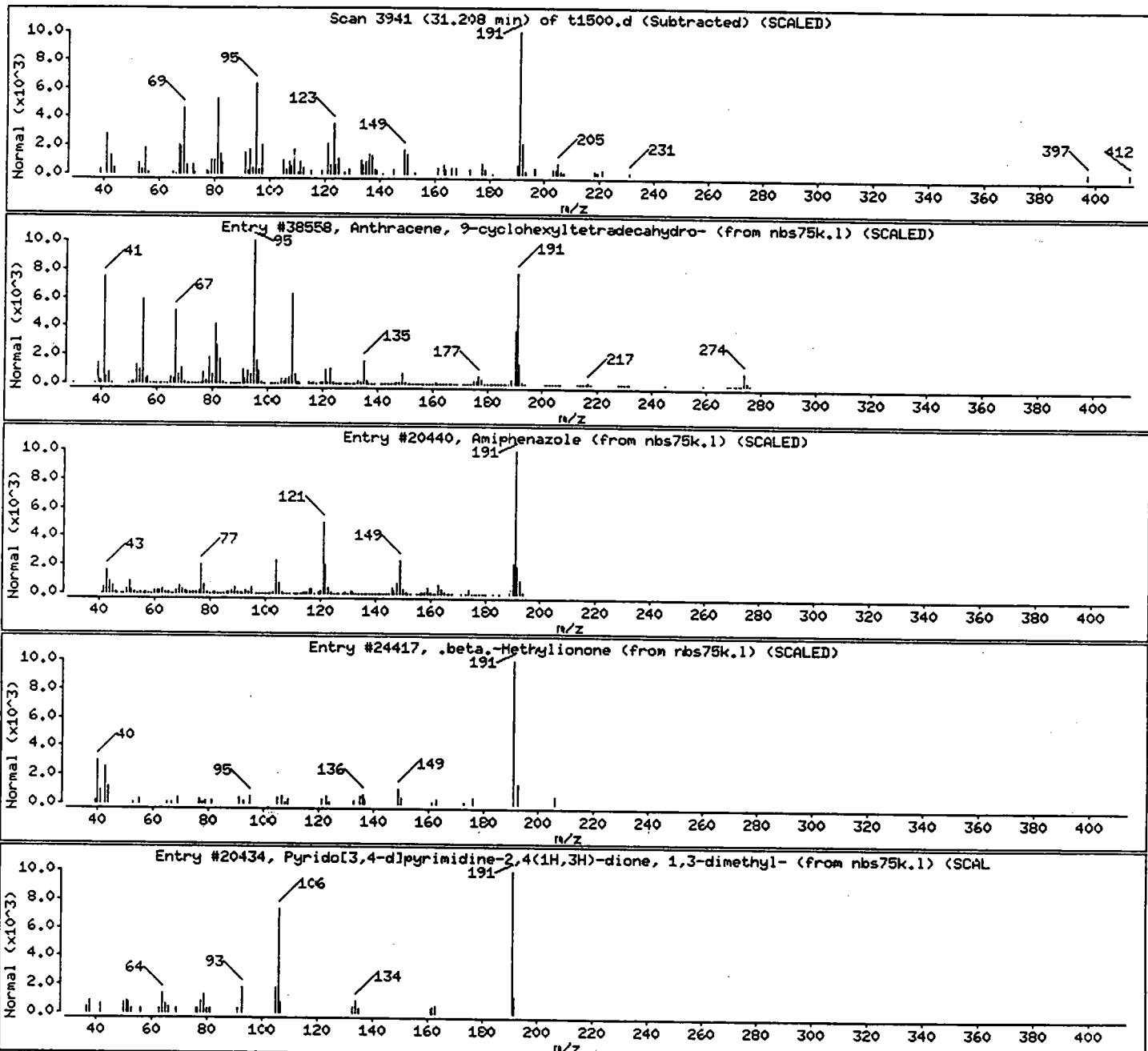
Sample Info: 96870;30;2;1;11.8

Operator: BNAMS3

Column phase: DB-5

Column diameter: 0.25

Library Search Compound Hatch	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Anthracene, 9-cyclohexyltetradecahydro-	55255-70-4	nbs75k.1	38558	40	C ₂₀ H ₃₄	274
Amiphenazole	490-55-1	nbs75k.1	20440	38	C ₉ H ₉ N ₃ S	191
.beta.-Methylionone	79-70-9	nbs75k.1	24417	37	C ₁₄ H ₂₂ O	206
Pyrido[3,4-d]pyrimidine-2,4(1H,3H)-dione	22389-83-9	nbs75k.1	20434	27	C ₉ H ₉ N ₃ O ₂	191



Client ID: PX-6
Site: Ortho Diagnostics

Lab Sample No: 96871
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9462.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 11

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Chloromethane	ND	1.1
Bromomethane	ND	1.1
Vinyl Chloride	ND	1.1
Chloroethane	ND	1.1
Methylene Chloride	21 B	1.1
Acetone	13	5.6
Trichlorofluoromethane	ND	1.1
1,1-Dichloroethene	ND	1.1
1,1-Dichloroethane	ND	1.1
trans-1,2-Dichloroethene	ND	1.1
cis-1,2-Dichloroethene	ND	1.1
Chloroform	ND	1.1
1,2-Dichloroethane	ND	1.1
1,1,1-Trichloroethane	ND	1.1
Carbon Tetrachloride	ND	1.1
Bromodichloromethane	ND	1.1
1,2-Dichloropropane	ND	1.1
cis-1,3-Dichloropropene	ND	1.1
Trichloroethene	ND	1.1
Dibromochloromethane	ND	1.1
1,1,2-Trichloroethane	ND	1.1
Benzene	ND	1.1
trans-1,3-Dichloropropene	ND	1.1
2-Chloroethyl Vinyl Ether	ND	1.1
Bromoform	ND	1.1
Tetrachloroethene	ND	1.1
1,1,2,2-Tetrachloroethane	ND	1.1
Toluene	ND	1.1
Chlorobenzene	ND	1.1
Ethylbenzene	ND	1.1
Xylene (Total)	ND	1.1

Client ID: PX-6
Site: Ortho Diagnostics

Lab Sample No: 96871
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9462.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 10.8

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Ethane, 1,1,2-trichloro-1,2,2-trifluor	6.09	13	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			
TOTAL ESTIMATED CONCENTRATION		13	

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9462.d
Report Date: 13-Jun-97 15:03:37

Envirotech Research Inc.

VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9462.d
Lab Smp Id: 96871 Client Smp ID: PX-6
Inj Date : 13-JUN-97 12:53:00
Operator : VOAMS 5 Inst ID: VOAMS1.i
Smp Info : 96871;;10.8;5;5
Misc Info : V393;4418;B26;CN
Comment :
Method : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/IFF8240.m
Meth Date : 13-Jun-97 09:56:07 Quant Type: ISTD
Cal Date : 06-JUN-97 13:06:00 Cal File: a9409.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PP_ACE.sub
Target Version: 3.20
Procesing Host: hp735

Concentration Formula: ((Vt/Ws) / ((100 - M)/100))

Name	Value	Description
Vt	5.000	Volume of final extract (mL)
Ws	5.000	Weight of sample extracted (g)
M	10.800	% Moisture (not decanted)

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/L)
6 Methylene Chloride	84	6.797	6.706	(0.754)	634450	18	21
* 2 Bromochloromethane	128	9.014	8.923	(1.000)	819544	50	
\$ 16 1,2-Dichloroethane-d4 (SUR)	65	9.753	9.677	(0.947)	1257858	50	56
* 19 1,4-Difluorobenzene	114	10.300	10.224	(1.000)	3684743	50	
\$ 37 Toluene-d8 (SUR)	98	12.147	12.086	(1.179)	3733809	47	52
* 32 Chlorobenzene-d5	117	13.832	13.756	(1.000)	2549850	50	
\$ 41 Bromofluorobenzene (SUR)	174	15.118	15.042	(1.093)	1023423	46	52
7 Acetone	43	6.132	6.085	(0.680)	91547	12	13

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9462.d

Date : 13-JUN-97 12:53:00

Client ID: PX-6

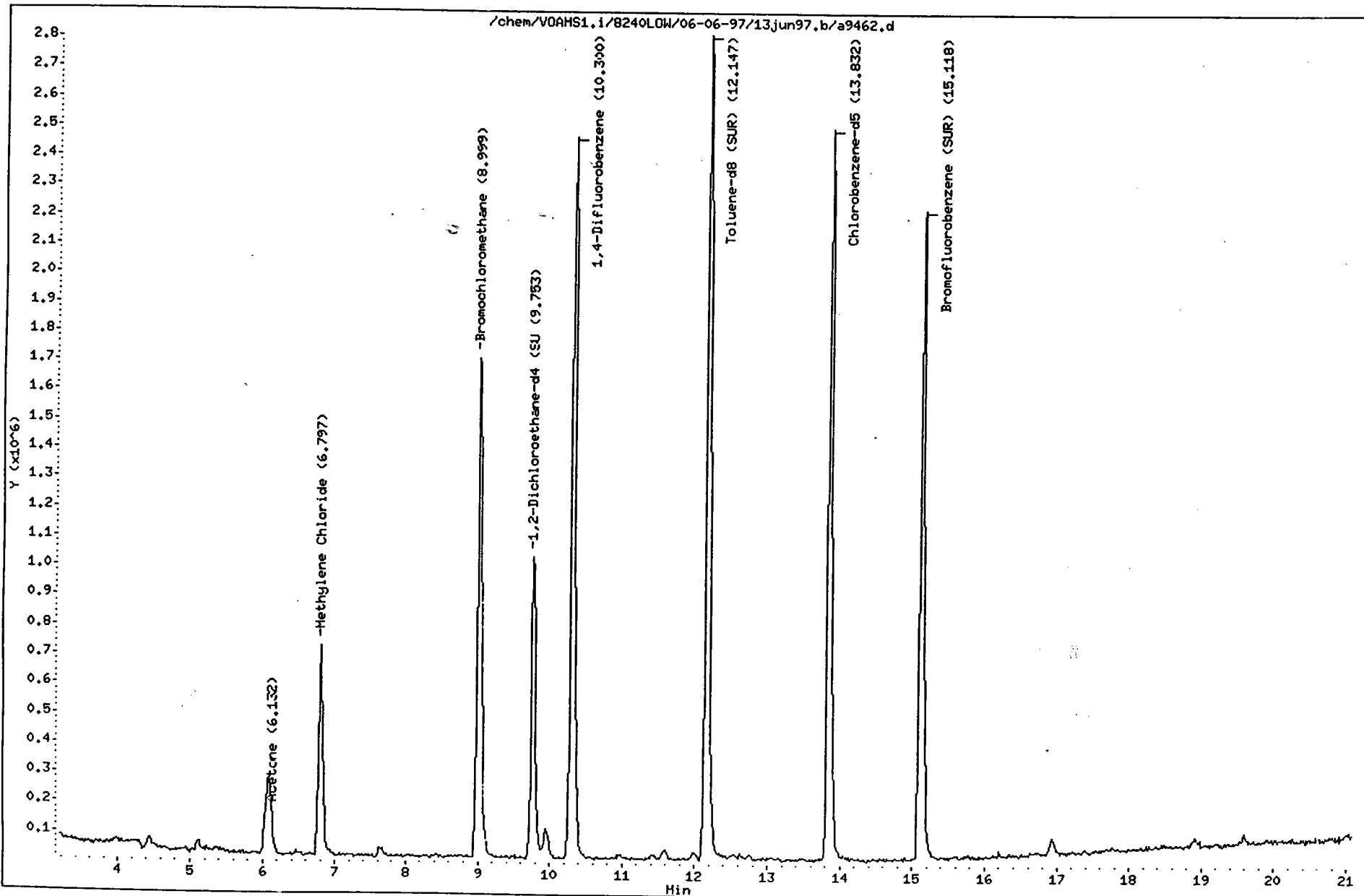
Sample Info: 96871;;10.8;5;5

Column phase: DB624

Instrument: VOAMS1.i

Operator: VOAMS 5

Column diameter: 0.53



Data File: /chem/VOAMS1.i/8240LOU/06-C6-97/13Jun97.b/a9462.d

Date : 13-JUN-97 12:53:00

Client ID: PX-6

Instrument: VOAMS1.i

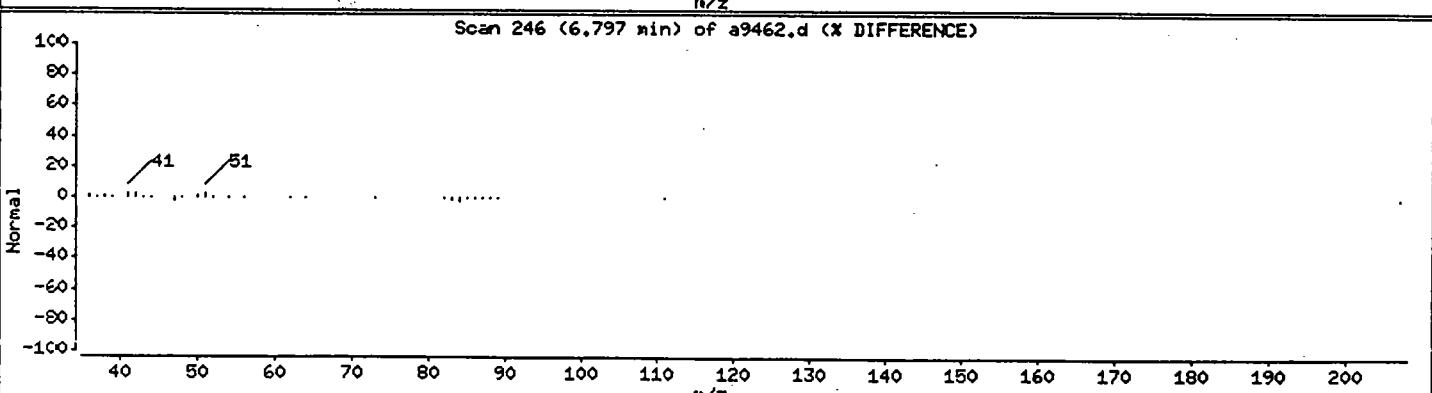
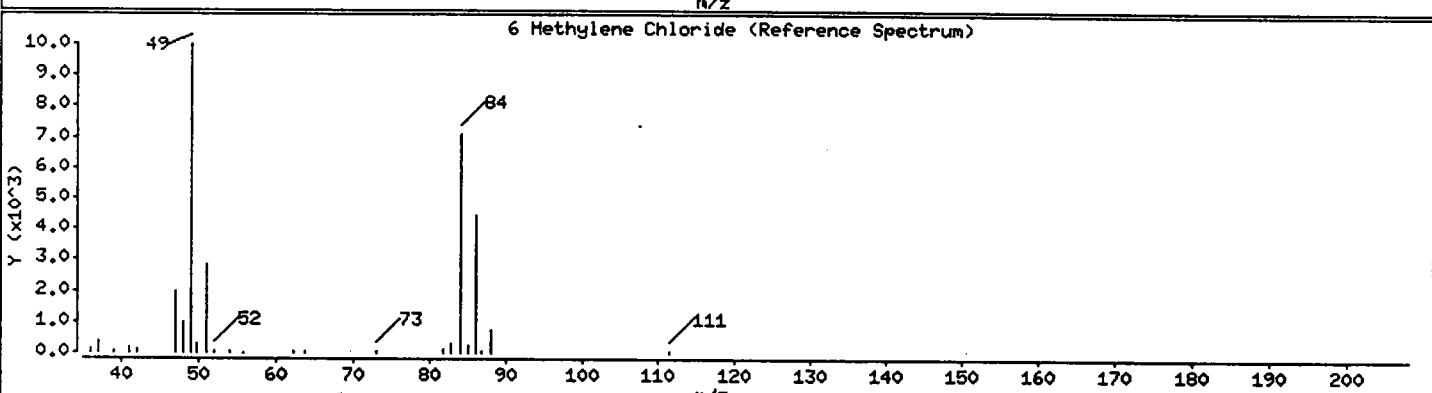
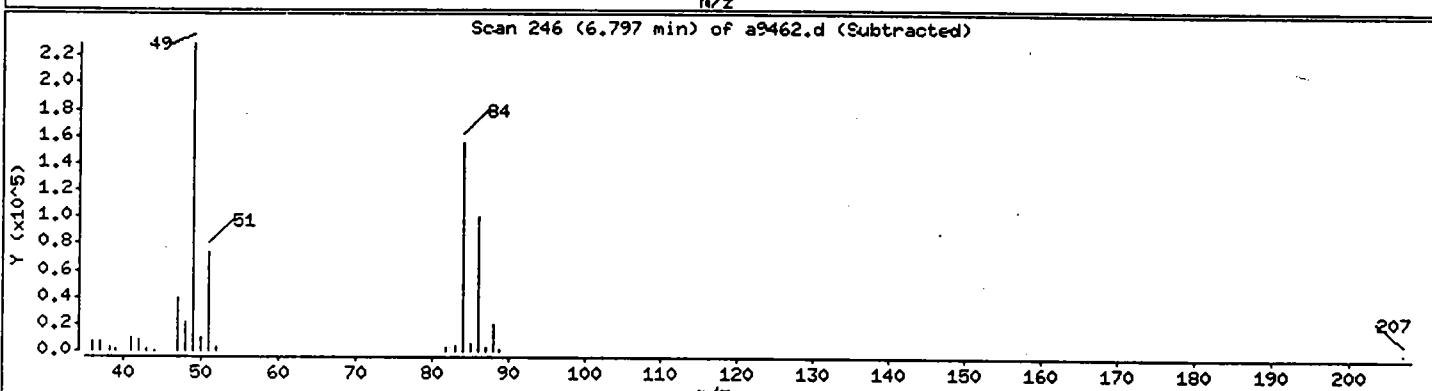
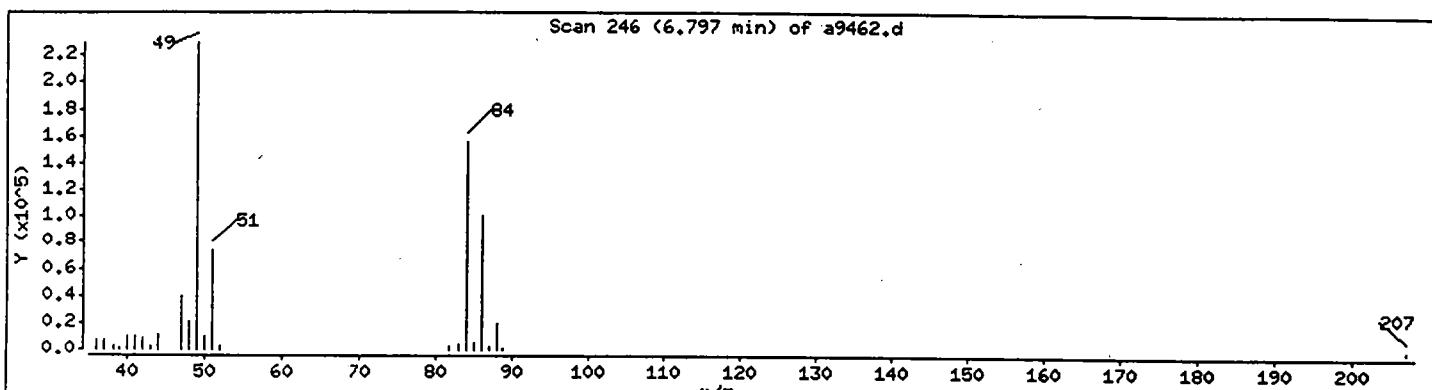
Sample Info: 96871;;10.8;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

6 Methylene Chloride



Data File: /chem/VOAMS1.i/824CLOH/06-06-97/13jun97.b/a9462.d

Date : 13-JUN-97 12:53:00

Instrument: VOAMS1.i

Client ID: PX-6

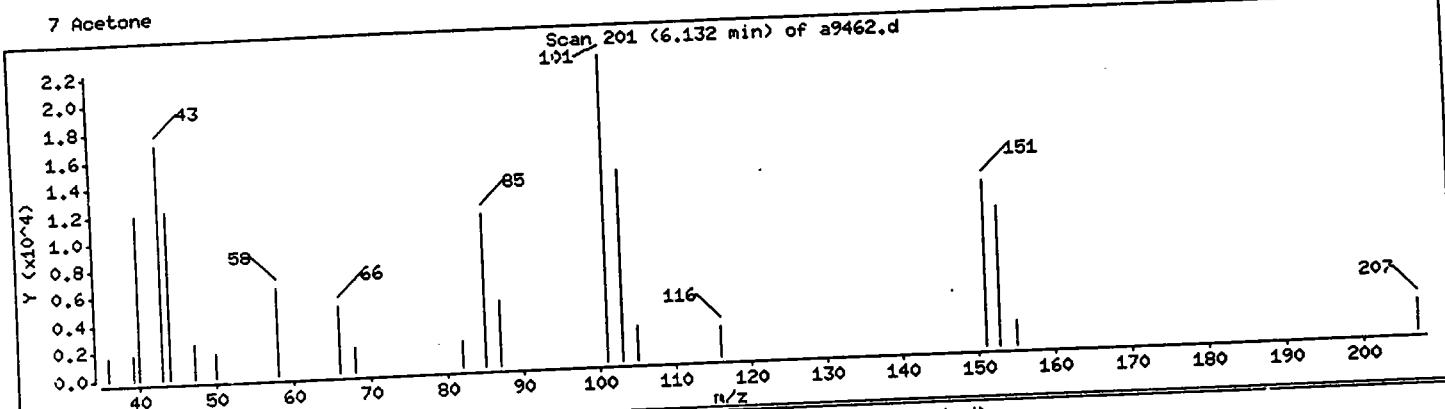
Sample Info: 96871;;10.8;5;5

Operator: VOAMS 5

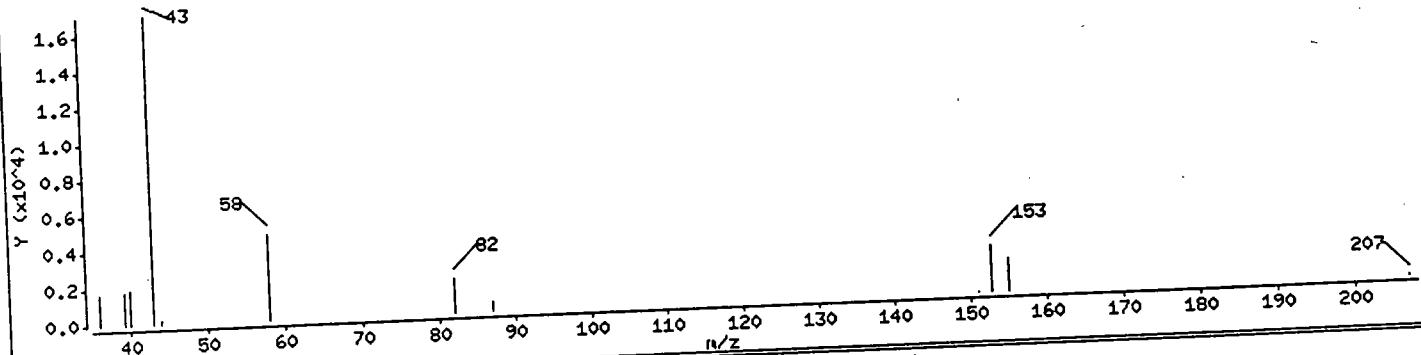
Column diameter: 0.53

Column phase: DB624

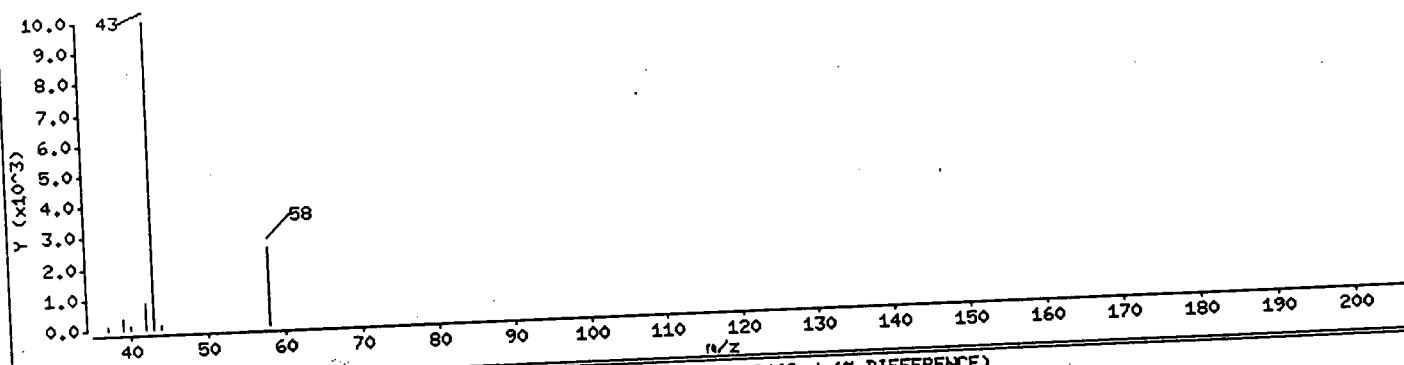
7 Acetone



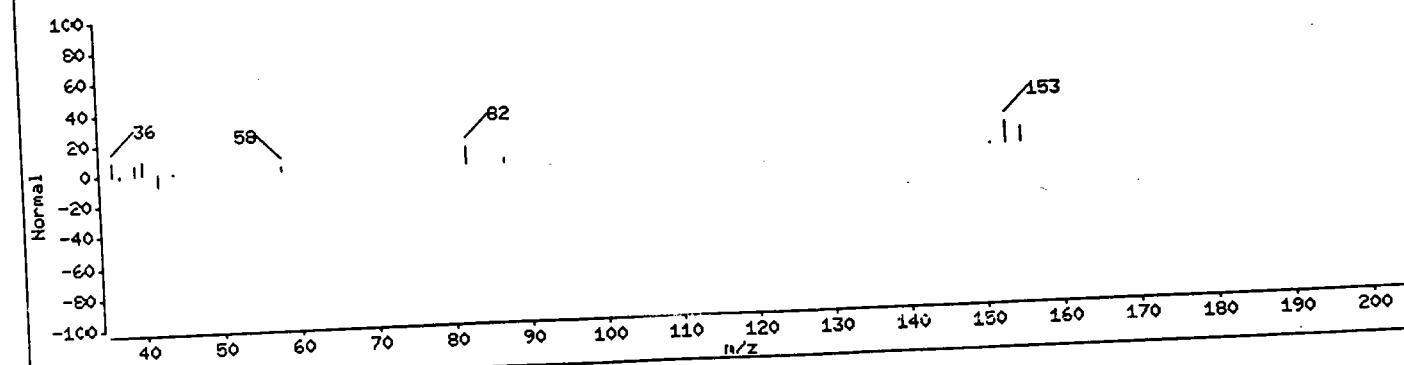
Scan 201 (6.132 min) of a9462.d (Subtracted)



7 Acetone (Reference Spectrum)



Scan 201 (6.132 min) of a9462.d (% DIFFERENCE)



Data File: /chem/VOAMS1.i /824COLW/06-C6-97/13jun97.b/a9462.d

Date : 13-JUN-97 12:53:00

Client ID: PX-6

Instrument: VOAMS1.i

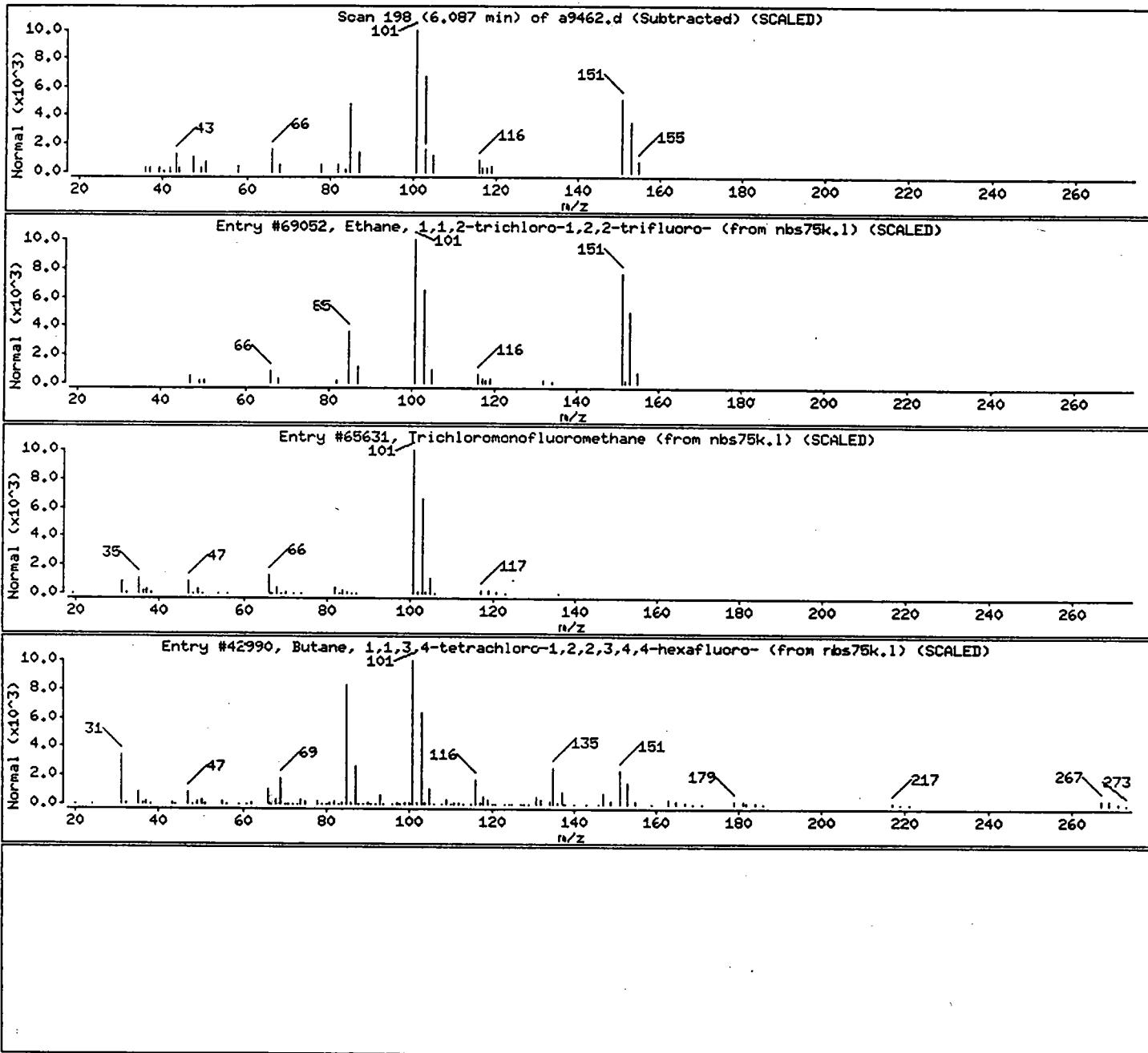
Sample Info: 96871;;10.8;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-	76-13-1	nbs75k.1	69052	83	C2C13F3	186
Trichloromonofluoromethane	75-69-4	nbs75k.1	65631	46	CC13F	136
Butane, 1,1,3,4-tetrachloro-1,2,2,3,4,4-	423-38-1	nbs75k.1	42990	23	C4C14F6	302



Client ID: PX-7
Site: Ortho Diagnostics

Lab Sample No: 96872
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9463.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 10

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Chloromethane	ND	1.1
Bromomethane	ND	1.1
Vinyl Chloride	ND	1.1
Chloroethane	ND	1.1
Methylene Chloride	24 B	1.1
Acetone	13	5.6
Trichlorofluoromethane	ND	1.1
1,1-Dichloroethene	ND	1.1
1,1-Dichloroethane	ND	1.1
trans-1,2-Dichloroethene	ND	1.1
cis-1,2-Dichloroethene	0.7J	1.1
Chloroform	1.2	1.1
1,2-Dichloroethane	ND	1.1
1,1,1-Trichloroethane	ND	1.1
Carbon Tetrachloride	ND	1.1
Bromodichloromethane	ND	1.1
1,2-Dichloropropane	ND	1.1
cis-1,3-Dichloropropene	ND	1.1
Trichloroethene	ND	1.1
Dibromochloromethane	ND	1.1
1,1,2-Trichloroethane	ND	1.1
Benzene	25	1.1
trans-1,3-Dichloropropene	ND	1.1
2-Chloroethyl Vinyl Ether	ND	1.1
Bromoform	ND	1.1
Tetrachloroethene	ND	1.1
1,1,2,2-Tetrachloroethane	ND	1.1
Toluene	ND	1.1
Chlorobenzene	ND	1.1
Ethylbenzene	ND	1.1
Xylene (Total)	ND	1.1

Client ID: PX-7
Site: Ortho Diagnostics

Lab Sample No: 96872
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9463.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 10.5

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Ether	5.70	6.2	
2. Ethane, 1,1,2-trichloro-1,2,2-trifluor	6.07	11	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

17

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9463.d
Report Date: 13-Jun-97 15:03:42

Envirotech Research Inc.

VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9463.d
Lab Smp Id: 96872 Client Smp ID: PX-7
Inj Date : 13-JUN-97 13:22:00
Operator : VOAMS 5 Inst ID: VOAMS1.i
Smp Info : 96872;10.5;5;5
Misc Info : V393;4418;B26;CN
Comment :
Method : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/IFF8240.m
Meth Date : 13-Jun-97 09:56:07 Quant Type: ISTD
Cal Date : 06-JUN-97 13:06:00 Cal File: a9409.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.20 Compound Sublist: PP_ACE.sub
Procesing Host: hp735

Concentration Formula: ((Vt/Ws) / ((100 - M)/100))

Name	Value	Description
Vt	5.000	Volume of final extract (mL)
Ws	5.000	Weight of sample extracted (g)
M	10.500	% Moisture (not decanted)

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/L)	FINAL (ug/Kg)
M 14 1,2-Dichloroethene (total)	100					23309	0.66	0.74(a)
6 Methylene Chloride	84	6.794	6.706 (0.754)	779408		22		24
13 cis-1,2-Dichloroethene	96	8.671	8.598 (0.962)	23309		0.66		0.74(a)
* 2 Bromochloromethane	128	9.011	8.923 (1.000)	860313		50		
15 Chloroform	83	9.100	9.012 (1.010)	63494		1.1		1.2
\$ 16 1,2-Dichloroethane-d4 (SUR)	65	9.750	9.677 (0.947)	1329167		51		57
28 Benzene	78	9.868	9.795 (0.958)	2044445		22		25
* 19 1,4-Difluorobenzene	114	10.297	10.224 (1.000)	3806634		50		
\$ 37 Toluene-d8 (SUR)	98	12.159	12.086 (1.181)	4065685		49		55
* 32 Chlorobenzene-d5	117	13.844	13.756 (1.000)	2717206		50		
\$ 41 Bromofluorobenzene (SUR)	174	15.115	15.042 (1.092)	1098331		47		52
7 Acetone	43	6.129	6.085 (0.680)	93641		12		13

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9463.d
Report Date: 13-Jun-97 15:03:42

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9463.d

Date : 13-JUN-97 13:22:00

Client ID: PX-7

Sample Info: 96872;;10.5;5;5

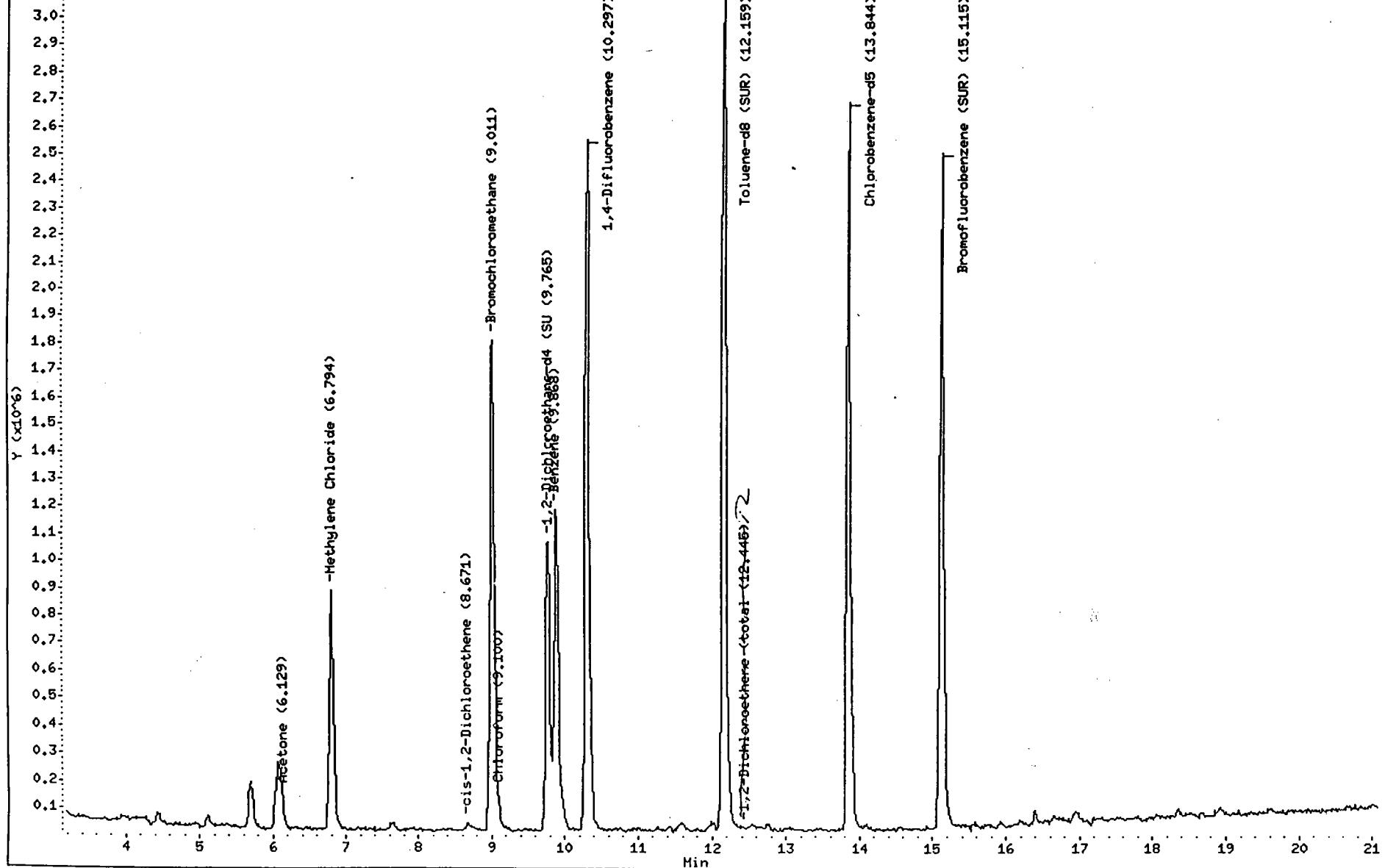
Column phase: DB624

Instrument: VOAMS1.i

Operator: VOAMS 5

Column diameter: 0.53

/chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9463.d



Data File: /chem/VOAMS1.i/824CLO4/06-06-97/13jun97.b/a9463.d

Date : 13-JUN-97 13:22:00

Client ID: PX-7

Instrument: VOAMS1.i

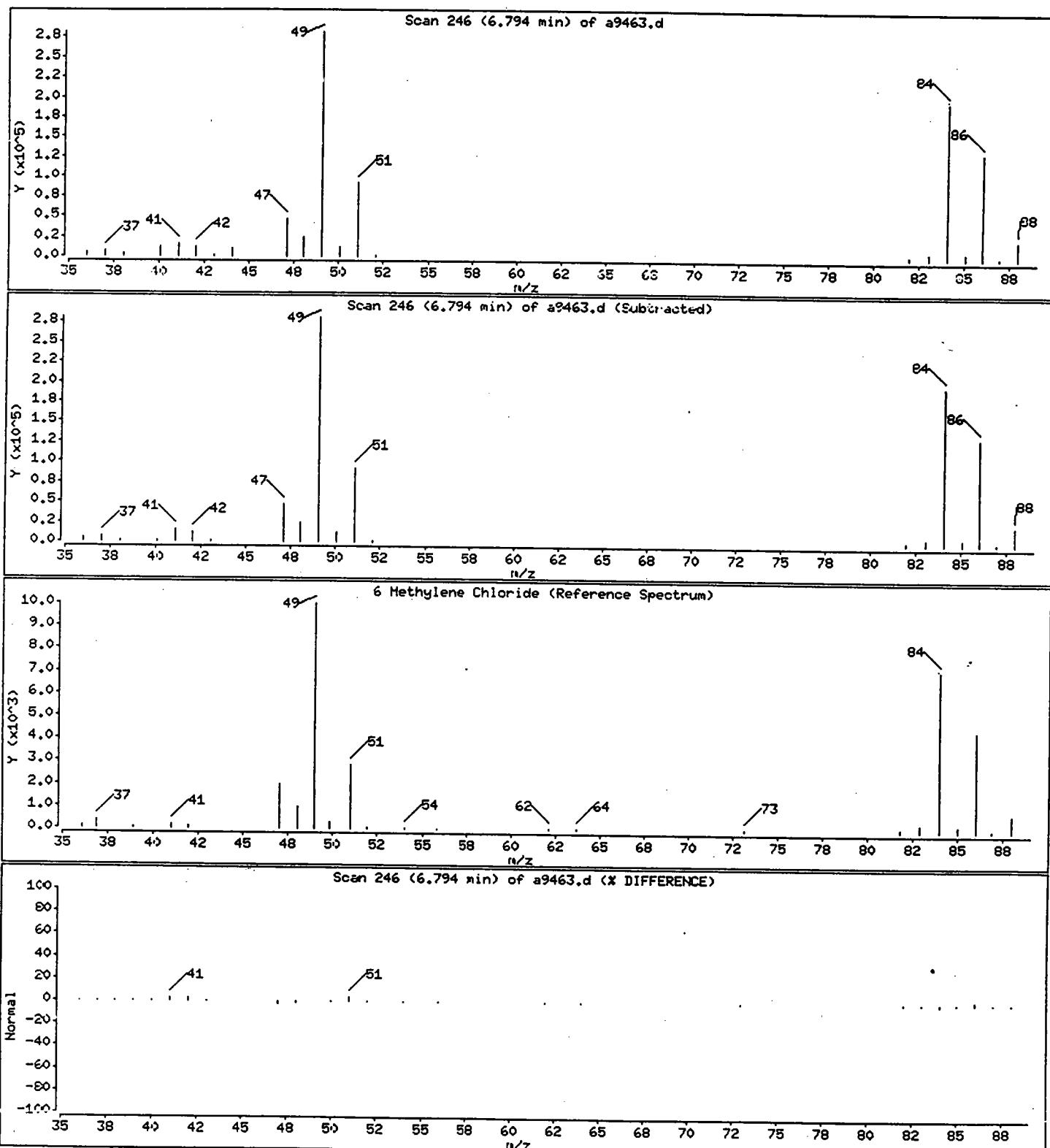
Sample Info: 96872;;10.5;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

6 Methylene Chloride



Data File: /chem/VOAMS1.i /824CL01H/06-C6-97/13jun97.b/a9463.d

Date : 13-JUN-97 13:22:00

Client ID: PX-7

Instrument: VOAMS1.i

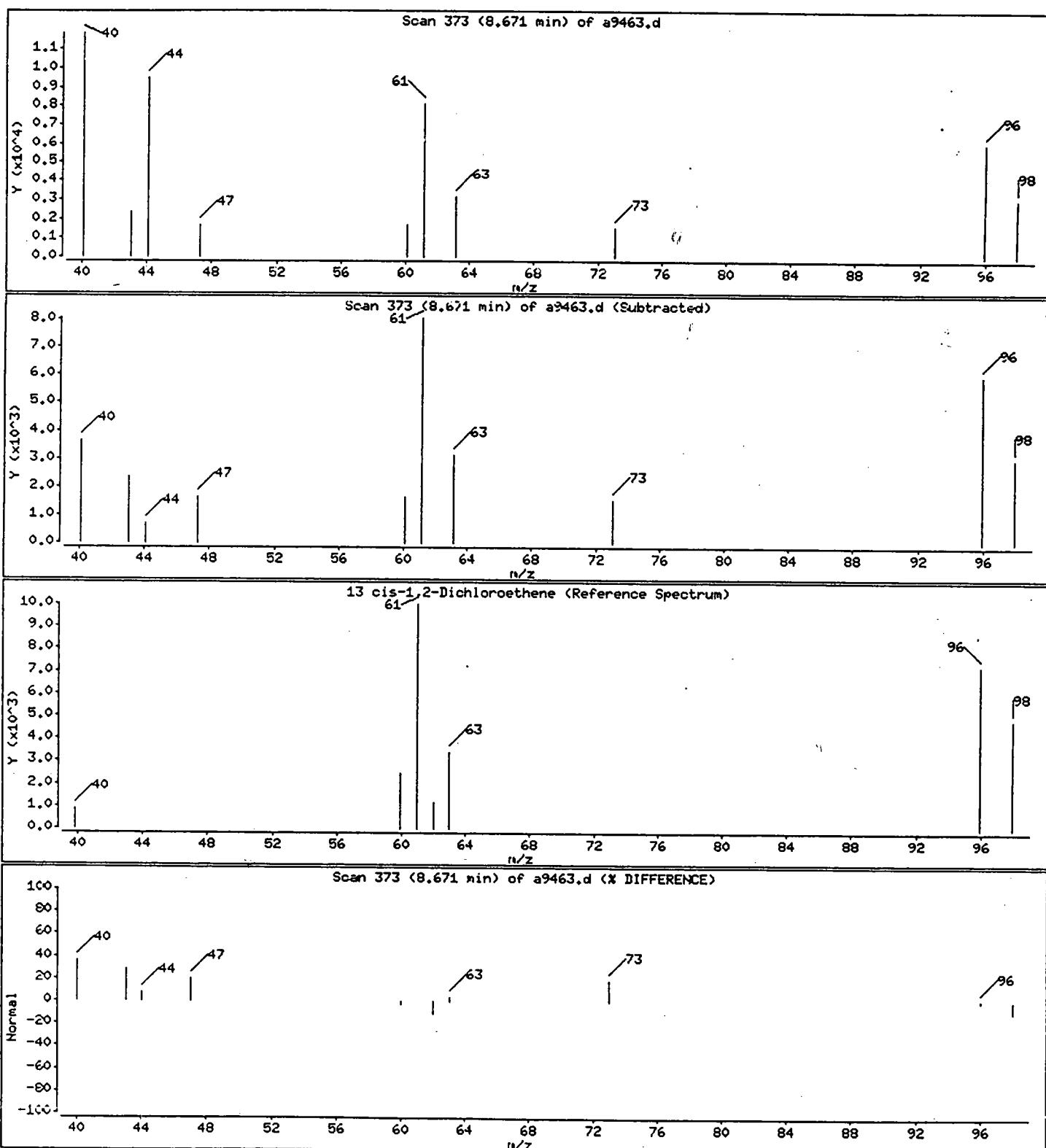
Sample Info: 96872;;10.5;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

13 cis-1,2-Dichloroethene



Data File: /chem/VOAMS1.i/924CLOH/06-C6-97/13jun97.b/a9463.d

Date : 13-JUN-97 13:22:00

Client ID: PX-7

Instrument: VOAMS1.i

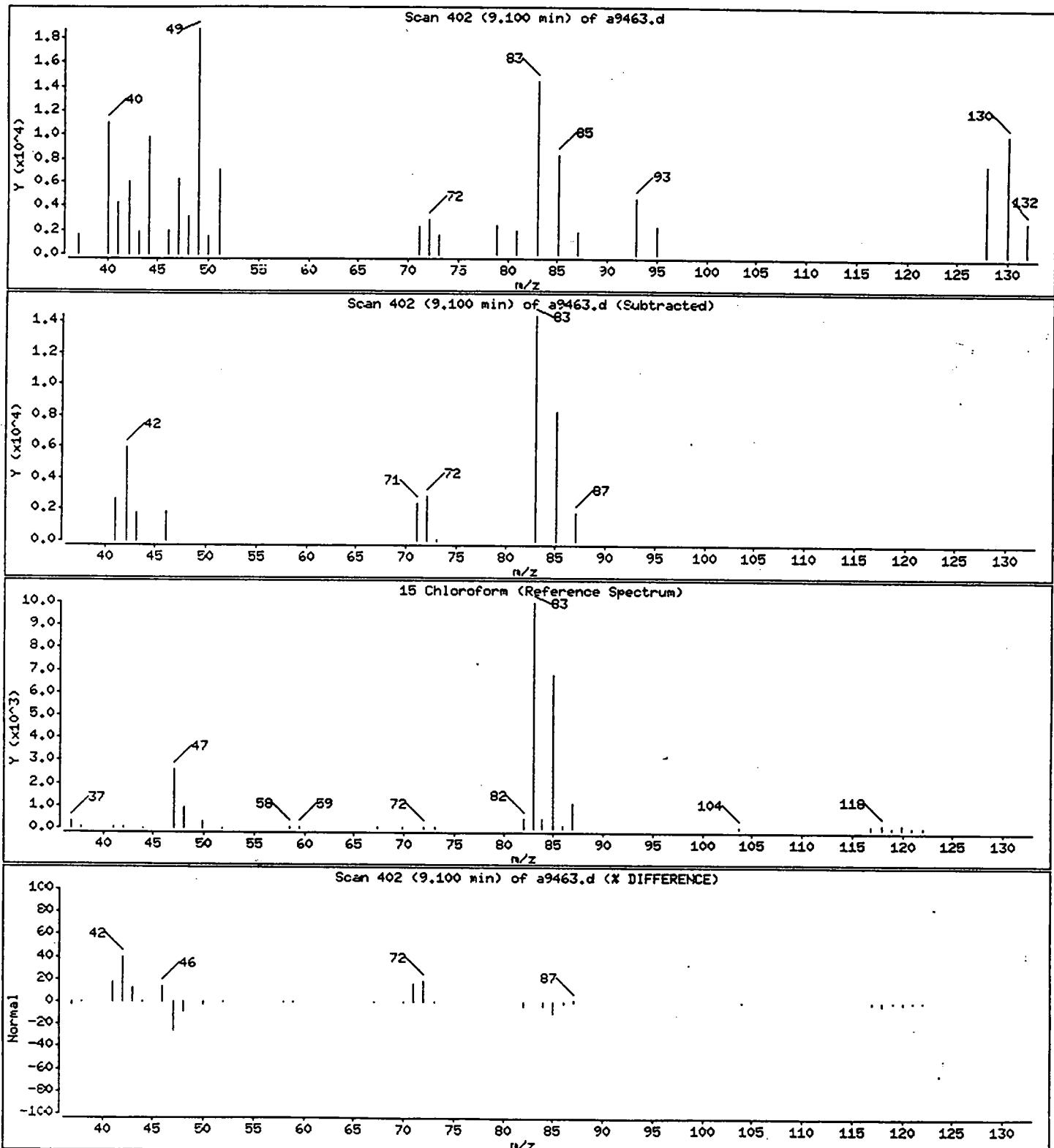
Sample Info: 96872;;10.5;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

15 Chloroform



Data File: /chem/VOAMS1.i/8240LOH/06-06-97/13jun97.b/a9463.d

Date : 13-JUN-97 13:22:00

Client ID: PX-7

Instrument: VOAMS1.i

Sample Info: 96872;;10.5;5;5

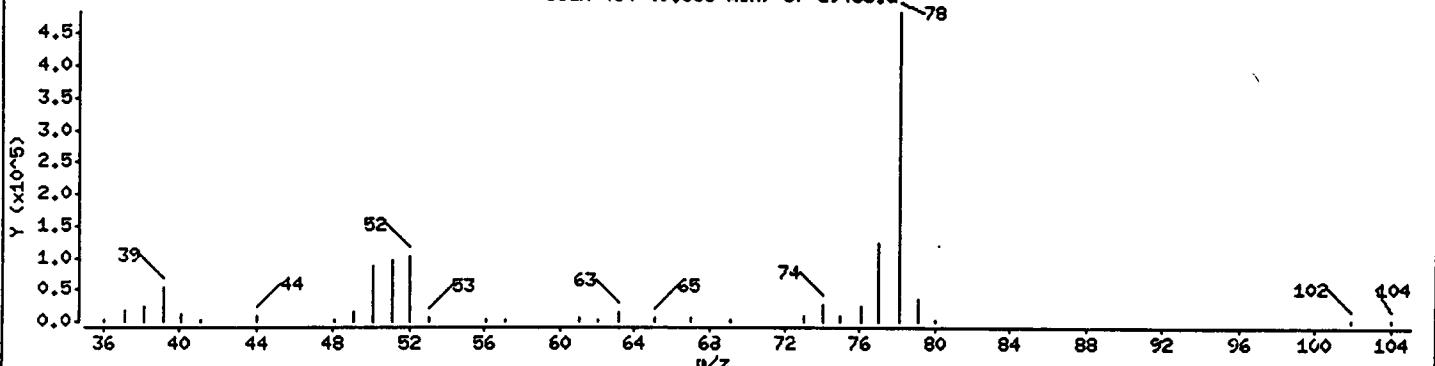
Operator: VOAMS 5

Column phase: DB624

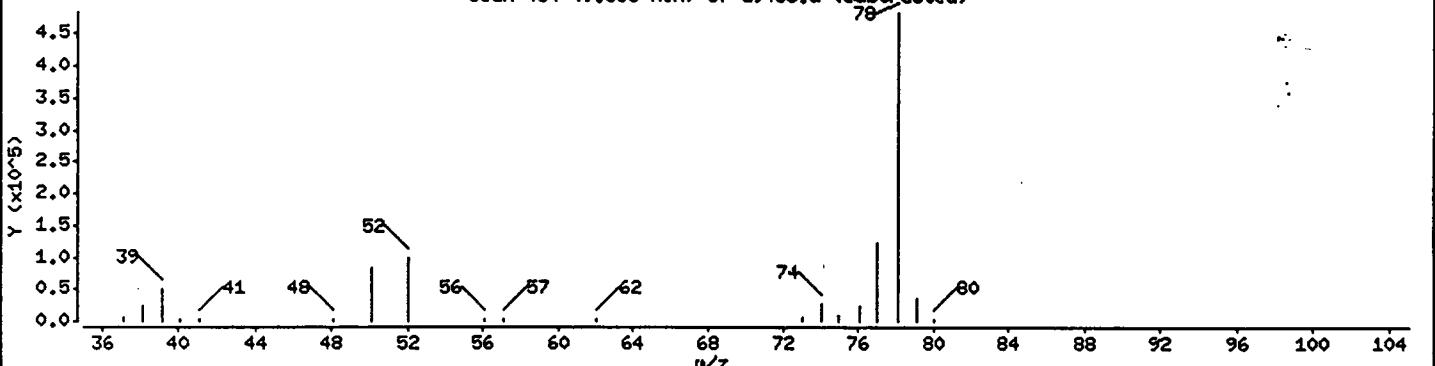
Column diameter: 0.53

28 Benzene

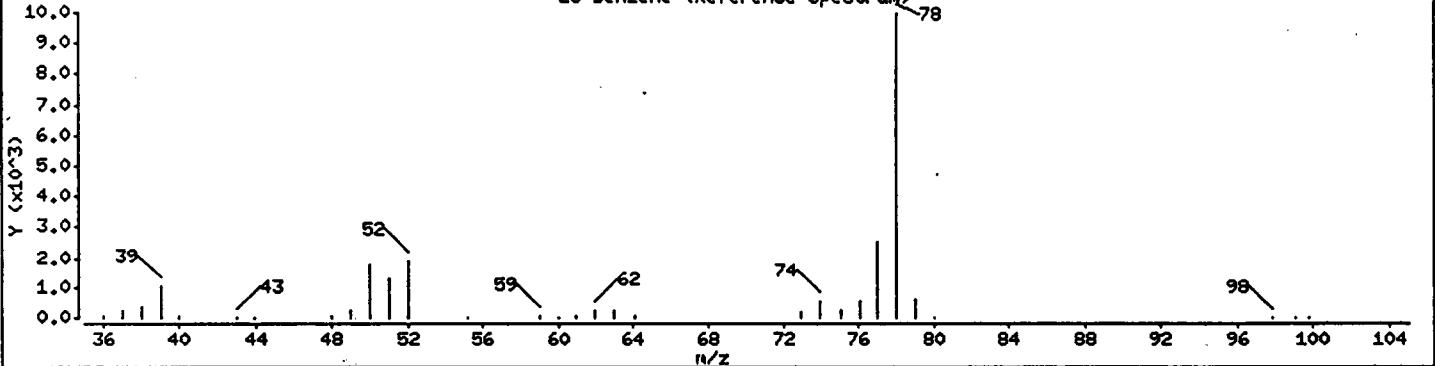
Scan 454 (9.868 min) of a9463.d



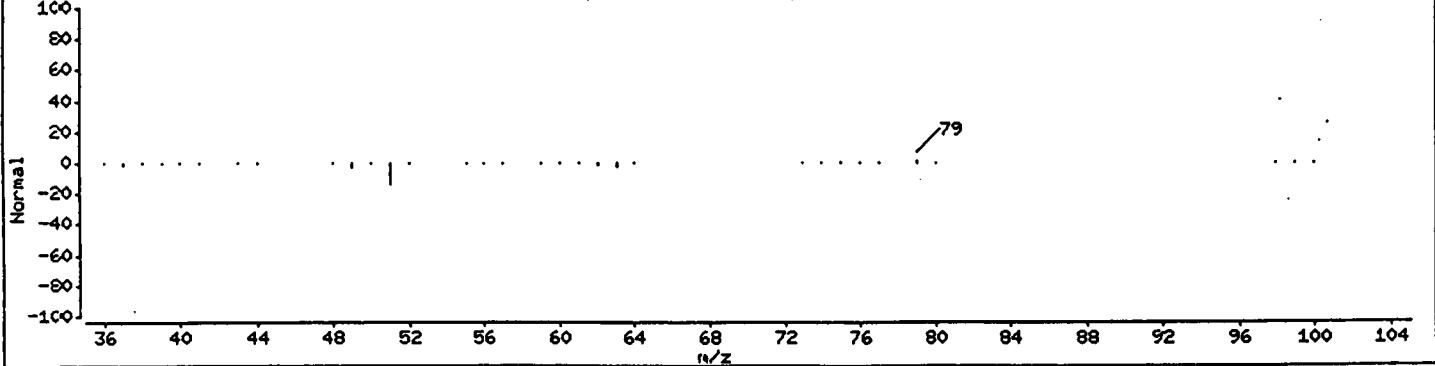
Scan 454 (9.868 min) of a9463.d (Subtracted)



28 Benzene (Reference Spectrum)



Scan 454 (9.868 min) of a9463.d (% DIFFERENCE)



Data File: /chem/VOAMS1.i/824CLOH/06-06-97/13jun97.b/a9463.d

Date : 13-JUN-97 13:22:00

Client ID: PX-7

Instrument: VOAMS1.i

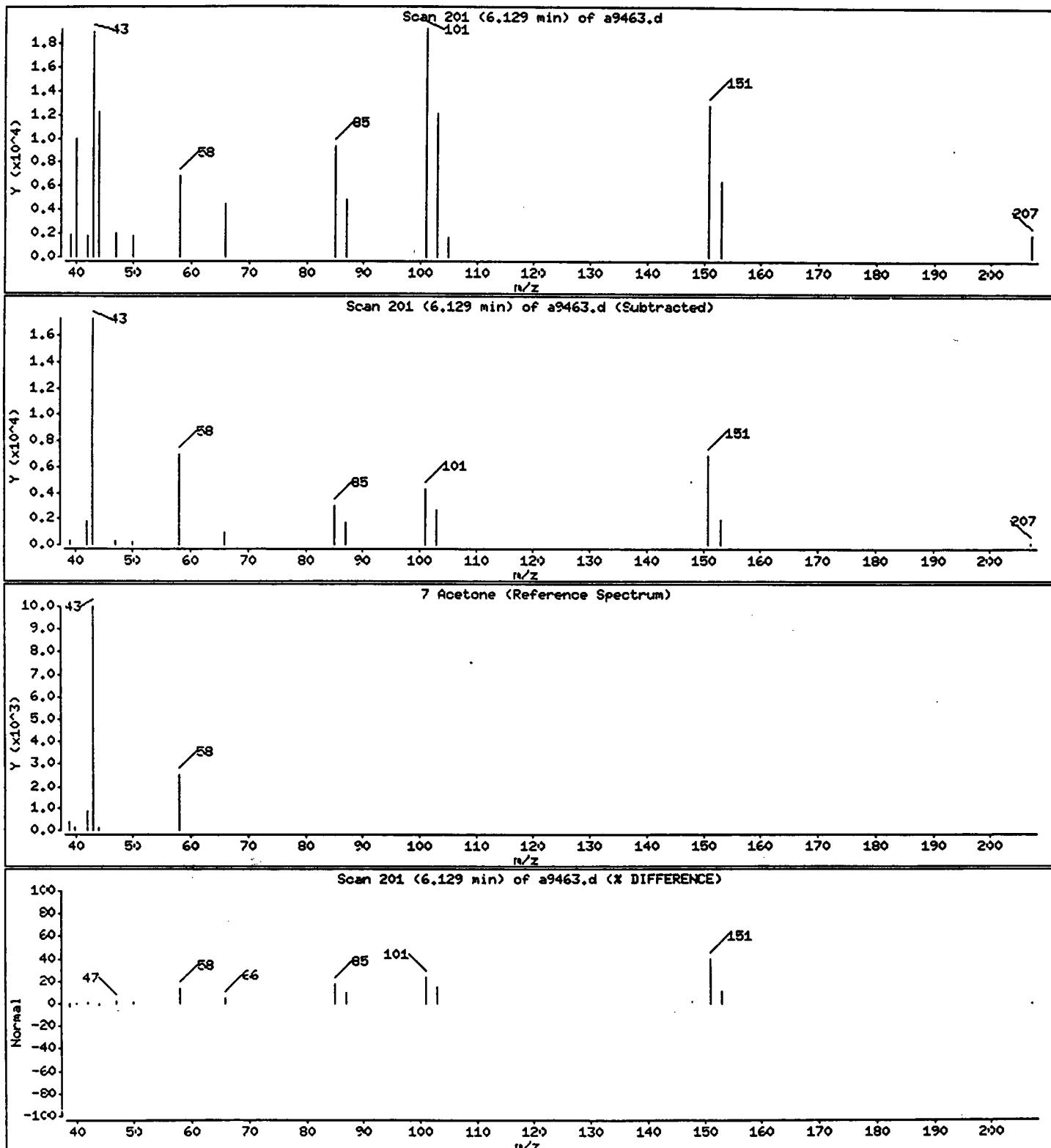
Sample Info: 96872;;10.5;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: .0.53

7 Acetone



Data File: /chem/VOAMS1.i/8240LOU/06-C6-97/13jun97.b/a9463.d

Date : 13-JUN-97 13:22:00

Client ID: PX-7

Instrument: VOAMS1.i

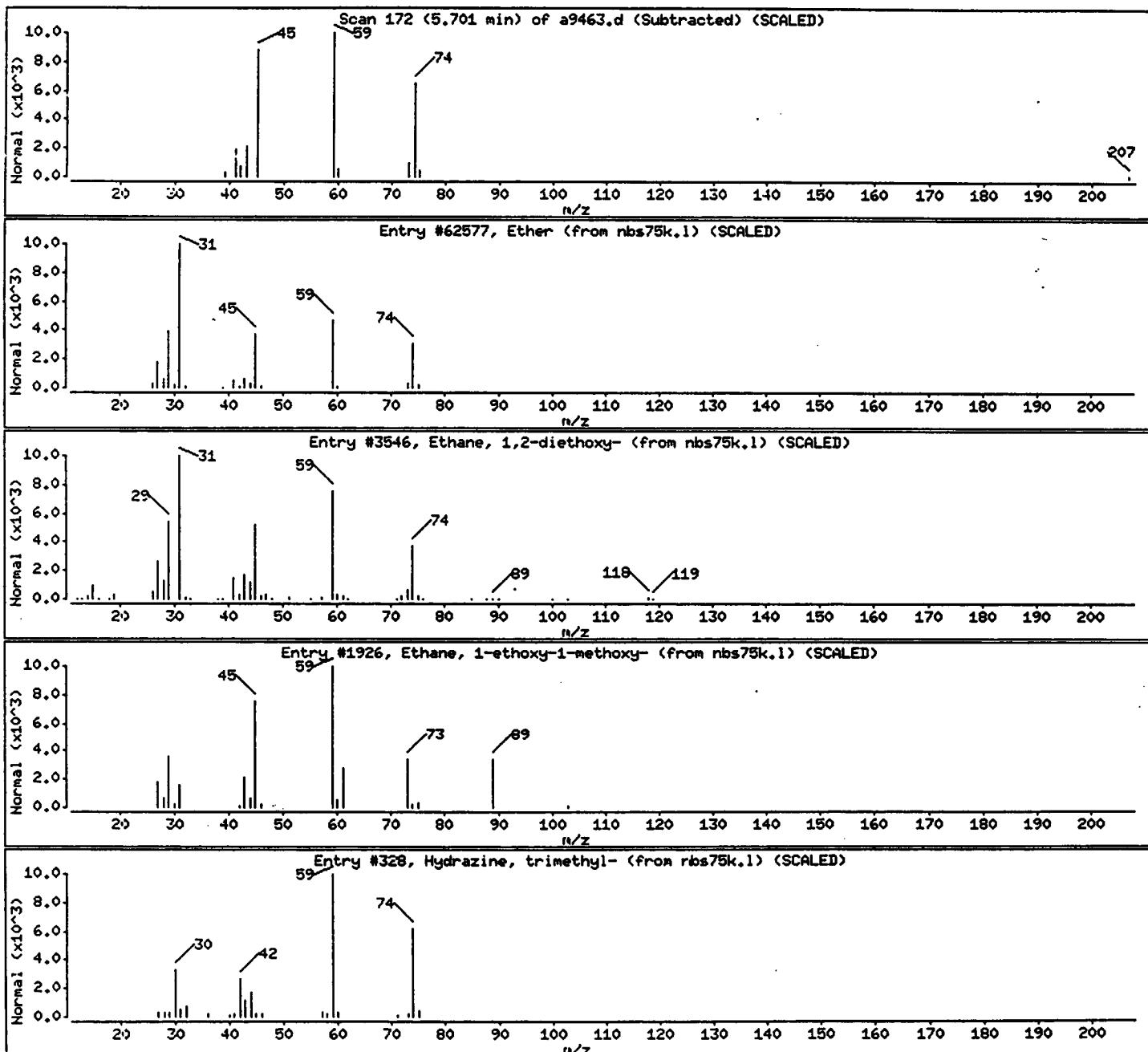
Sample Info: 96872;;10.5;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Ether	60-29-7	nbs75k.1	62577	90	C4H10O	74
Ethane, 1,2-diethoxy-	629-14-1	nbs75k.1	3546	64	C6H14O2	118
Ethane, 1-ethoxy-1-methoxy-	10471-14-4	nbs75k.1	1926	38	C5H12O2	104
Hydrazine, trimethyl-	1741-01-1	nbs75k.1	328	38	C3H10N2	74



Data File: /chem/VOAMS1.i/8246LOH/06-C6-97/13jun97.b/a9463.d

Date : 13-JUN-97 13:22:00

Client ID: PX-7

Instrument: VOAMS1.i

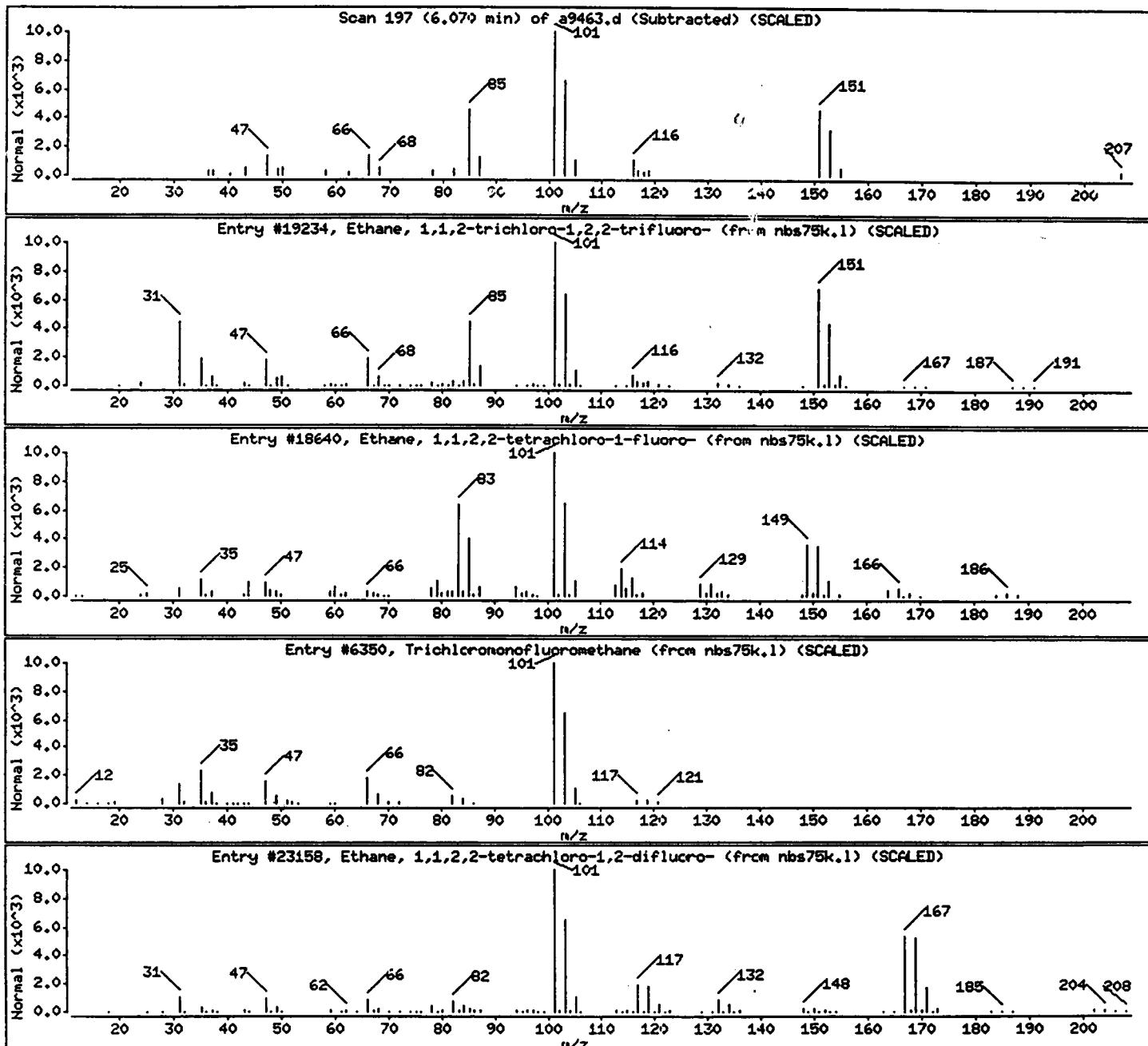
Sample Info: 96872;;10.5;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-	76-13-1	nbs75k.l	19234	86	C2Cl3F3	186
Ethane, 1,1,2,2-tetrachloro-1-fluoro-	354-14-3	nbs75k.l	18640	64	C2HC14F	184
Trichloromonofluoromethane	75-69-4	nbs75k.l	6350	43	CC13F	136
Ethane, 1,1,2,2-tetrachloro-1,2-difluoro	76-12-0	nbs75k.l	23158	37	C2C14F2	202



Client ID: PX-8
Site: Ortho Diagnostics

Lab Sample No: 96873
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9464.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 12

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Chloromethane	ND	1.1
Bromomethane	ND	1.1
Vinyl Chloride	ND	1.1
Chloroethane	ND	1.1
Methylene Chloride	52 B	1.1
Acetone	14	5.6
Trichlorofluoromethane	ND	1.1
1,1-Dichloroethene	ND	1.1
1,1-Dichloroethane	ND	1.1
trans-1,2-Dichloroethene	ND	1.1
cis-1,2-Dichloroethene	1.2	1.1
Chloroform	2.8	1.1
1,2-Dichloroethane	ND	1.1
1,1,1-Trichloroethane	ND	1.1
Carbon Tetrachloride	ND	1.1
Bromodichloromethane	ND	1.1
1,2-Dichloropropane	ND	1.1
cis-1,3-Dichloropropene	ND	1.1
Trichloroethene	ND	1.1
Dibromochloromethane	ND	1.1
1,1,2-Trichloroethane	ND	1.1
Benzene	56	1.1
trans-1,3-Dichloropropene	ND	1.1
2-Chloroethyl Vinyl Ether	ND	1.1
Bromoform	ND	1.1
Tetrachloroethene	ND	1.1
1,1,2,2-Tetrachloroethane	ND	1.1
Toluene	ND	1.1
Chlorobenzene	ND	1.1
Ethylbenzene	ND	1.1
Xylene (Total)	0.8J	1.1

Client ID: PX-8
Site: Ortho Diagnostics

Lab Sample No: 96873
Lab Job No: V393

Date Sampled: 06/11/97
Date Received: 06/12/97
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9464.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 11.5

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Ether	5.70	13	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

13

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9464.d
Report Date: 13-Jun-97 15:03:47

Envirotech Research Inc.

VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9464.d
Lab Smp Id: 96873 Client Smp ID: PX-8
Inj Date : 13-JUN-97 13:52:00
Operator : VOAMS 5 Inst ID: VOAMS1.i
Smp Info : 96873;;11.5;5;5
Misc Info : V393;4418;B26;CN
Comment :
Method : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/IFF8240.m
Meth Date : 13-Jun-97 09:56:07 Quant Type: ISTD
Cal Date : 06-JUN-97 13:06:00 Cal File: a9409.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PP_ACE.sub
Target Version: 3.20
Procesing Host: hp735

Concentration Formula: ((Vt/Ws) / ((100 - M)/100))

Name	Value	Description
Vt	5.000	Volume of final extract (mL)
Ws	5.000	Weight of sample extracted (g)
M	11.500	% Moisture (not decanted)

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/L)	FINAL (ug/Kg)
M 14 1,2-Dichloroethene (total)	100					24148	1.1	1.2
6 Methylene Chloride	84	6.794	6.706 (0.754)	1068958		46	52	
13 cis-1,2-Dichloroethene	96	8.671	8.598 (0.962)	24148		1.1	1.2	
* 2 Bromochloromethane	128	9.011	8.923 (1.000)	546458		50		
15 Chloroform	83	9.085	9.012 (1.008)	94392		2.5	2.8	
\$ 16 1,2-Dichloroethane-d4 (SUR)	65	9.764	9.677 (0.948)	843822		53	60	
28 Benzene	78	9.883	9.795 (0.960)	2810390		50	56	
* 19 1,4-Difluorobenzene	114	10.296	10.224 (1.000)	2327431		50		
\$ 37 Toluene-d8 (SUR)	98	12.159	12.086 (1.181)	2517753		50	56	
* 32 Chlorobenzene-d5	117	13.844	13.756 (1.000)	1728594		50		
M 45 Xylene (Total)	100					16328	0.71	0.80(a)
44 o-Xylene	106	14.553	14.465 (1.051)	16328		0.75	0.85(a)	
\$ 41 Bromofluorobenzene (SUR)	174	15.129	15.042 (1.093)	705428		47	53	
7 Acetone	43	6.129	6.085 (0.680)	63214		12	14	

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9464.d
Report Date: 13-Jun-97 15:03:47

C Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13Jun97.b/a9464.d

Date : 13-JUN-97 13:52:00

Client ID: PX-8

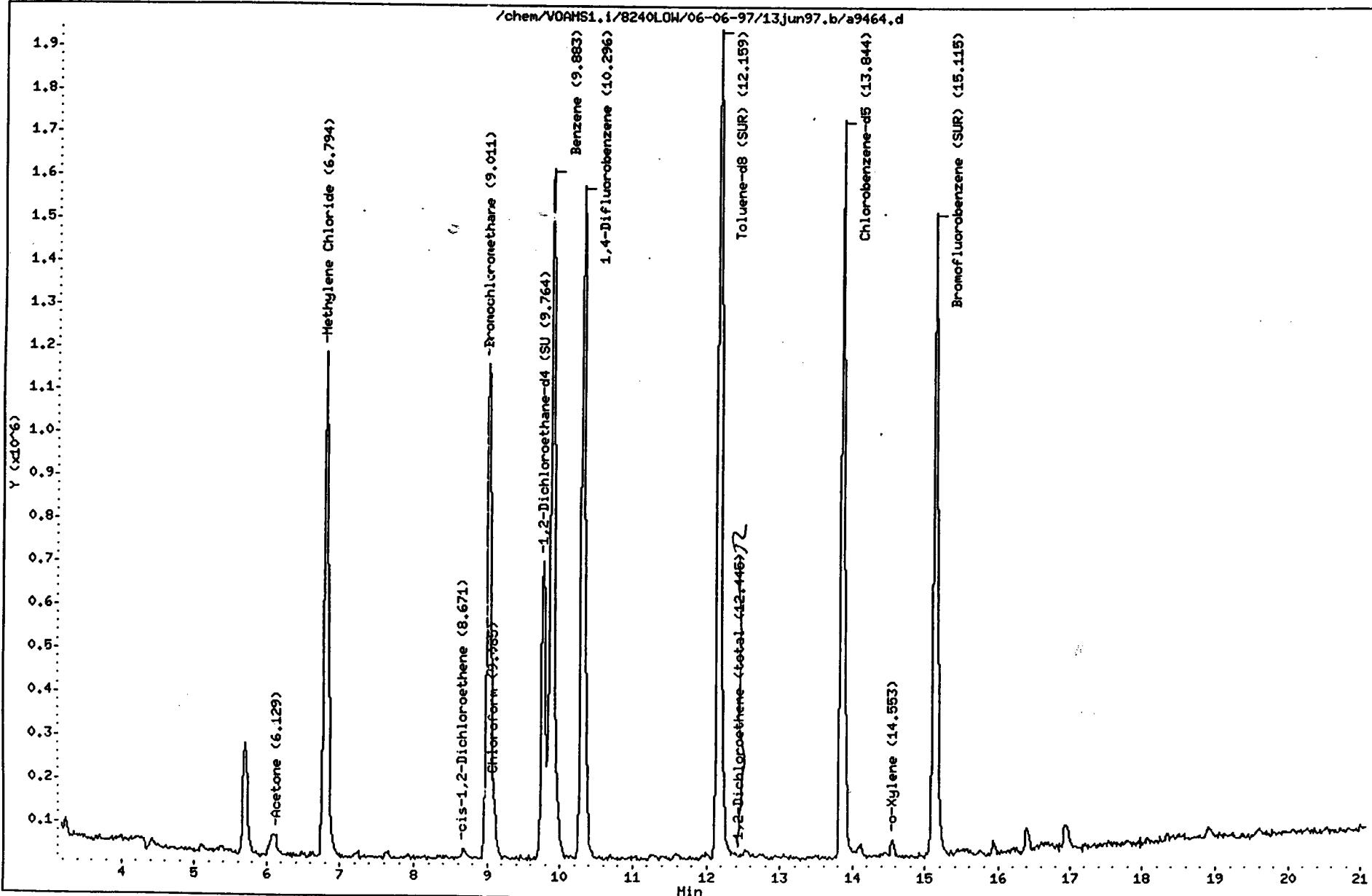
Sample Info: 96873;;11.6;5;5

Instrument: VOAMS1.i

Column phase: DB624

Operator: VOAMS 5

Column diameter: 0.53



Data File: /chem/VOAMS1.1/824CL04/06-06-97/13jun97.b/a9464.d

Date : 13-JUN-97 13:52:00

Client ID: PX-8

Instrument: VOAMS1.i

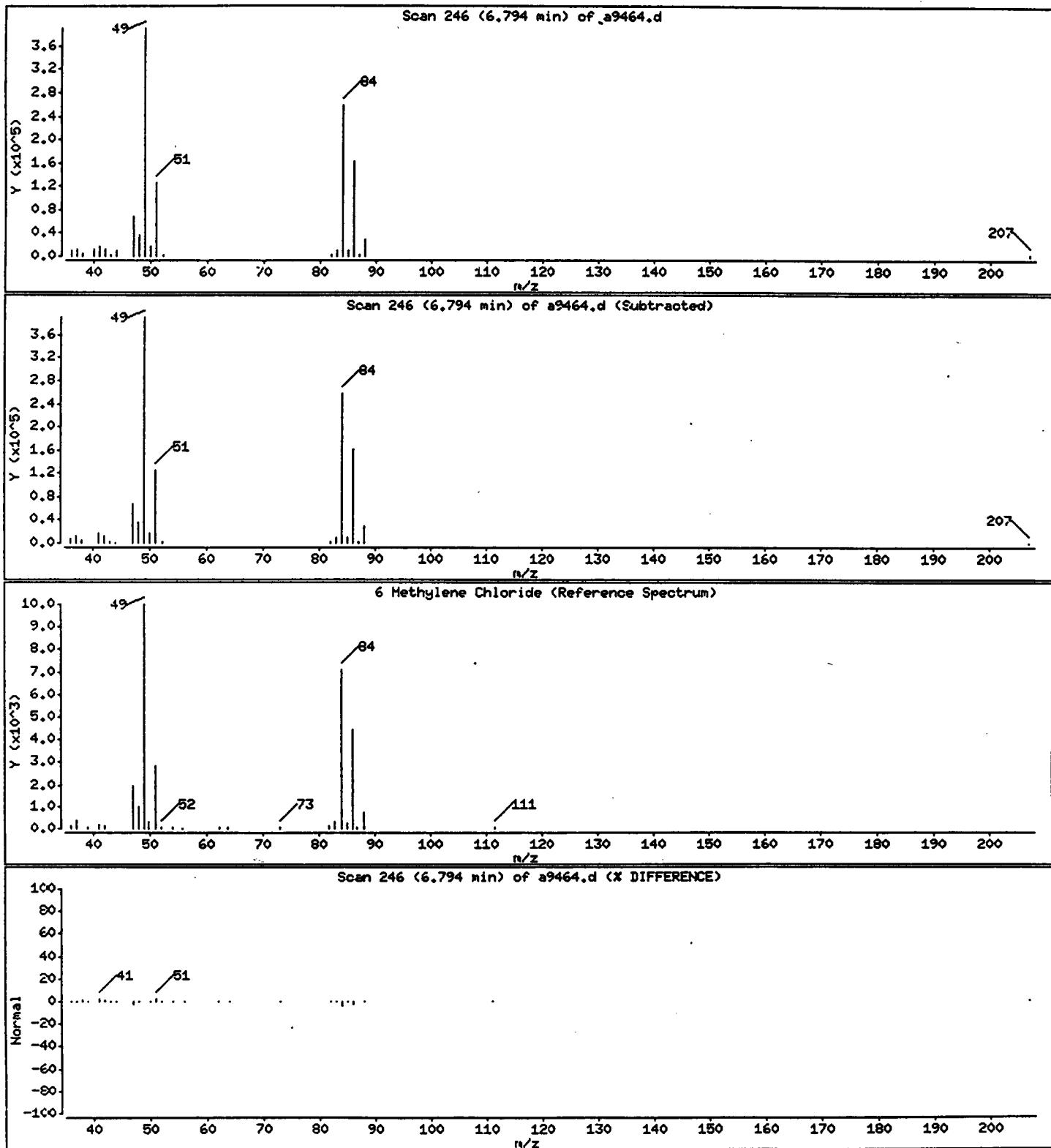
Sample Info: 96873;;11.5;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

6 Methylene Chloride



Data File: /chem/VOAMS1.i/8240LOL/06-06-97/13jun97.b/a9464.d

Date : 13-JUN-97 13:52:00

Client ID: PX-8

Instrument: VOAMS1.i

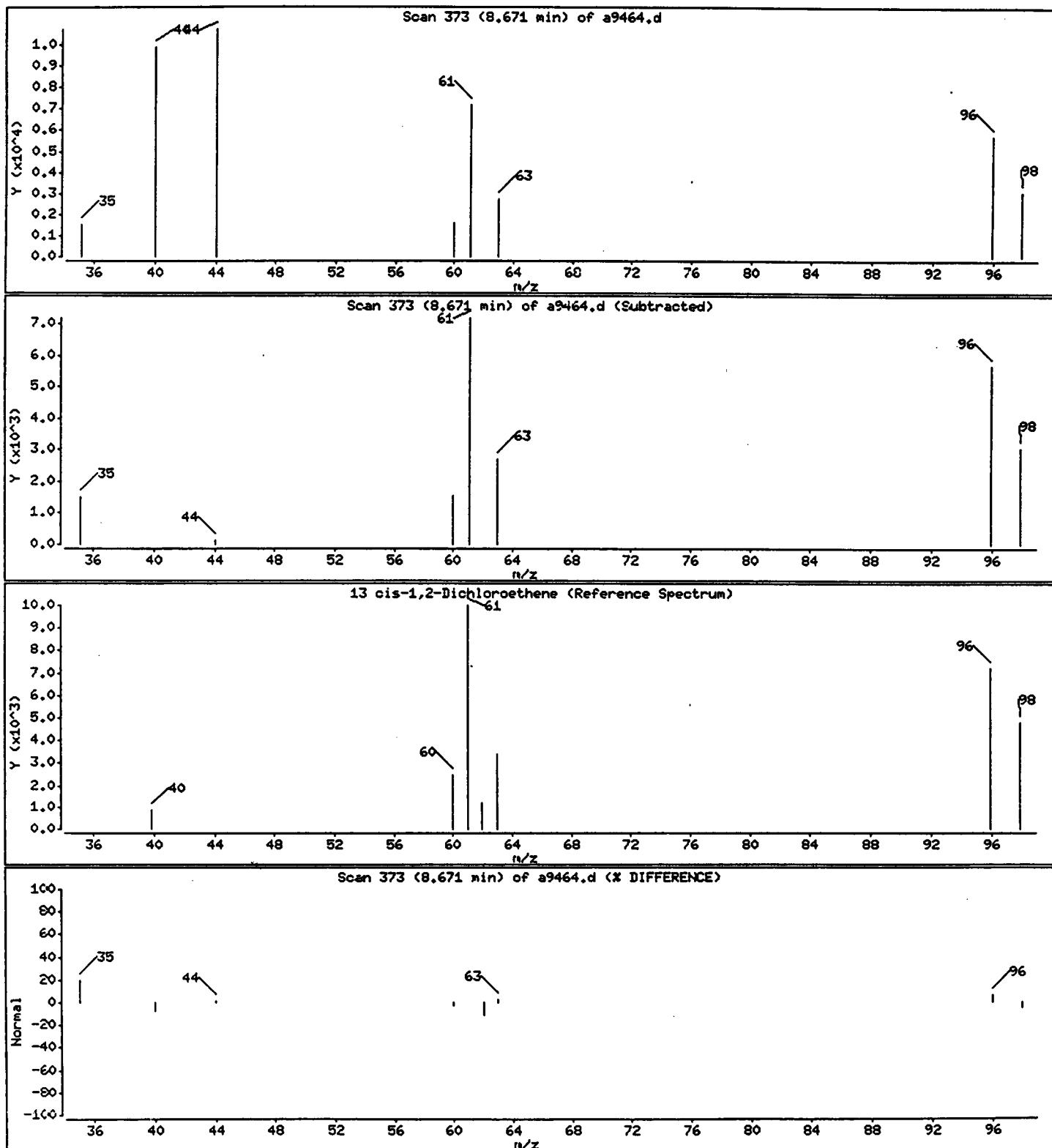
Sample Info: 96873;;11.5;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

13 cis-1,2-Dichloroethene



Data File: /chem/VOAMS1.i/8240LOU/06-06-97/13jun97.b/a9464.d

Date : 13-JUN-97 13:52:00

Client ID: PX-8

Instrument: VOAMS1.i

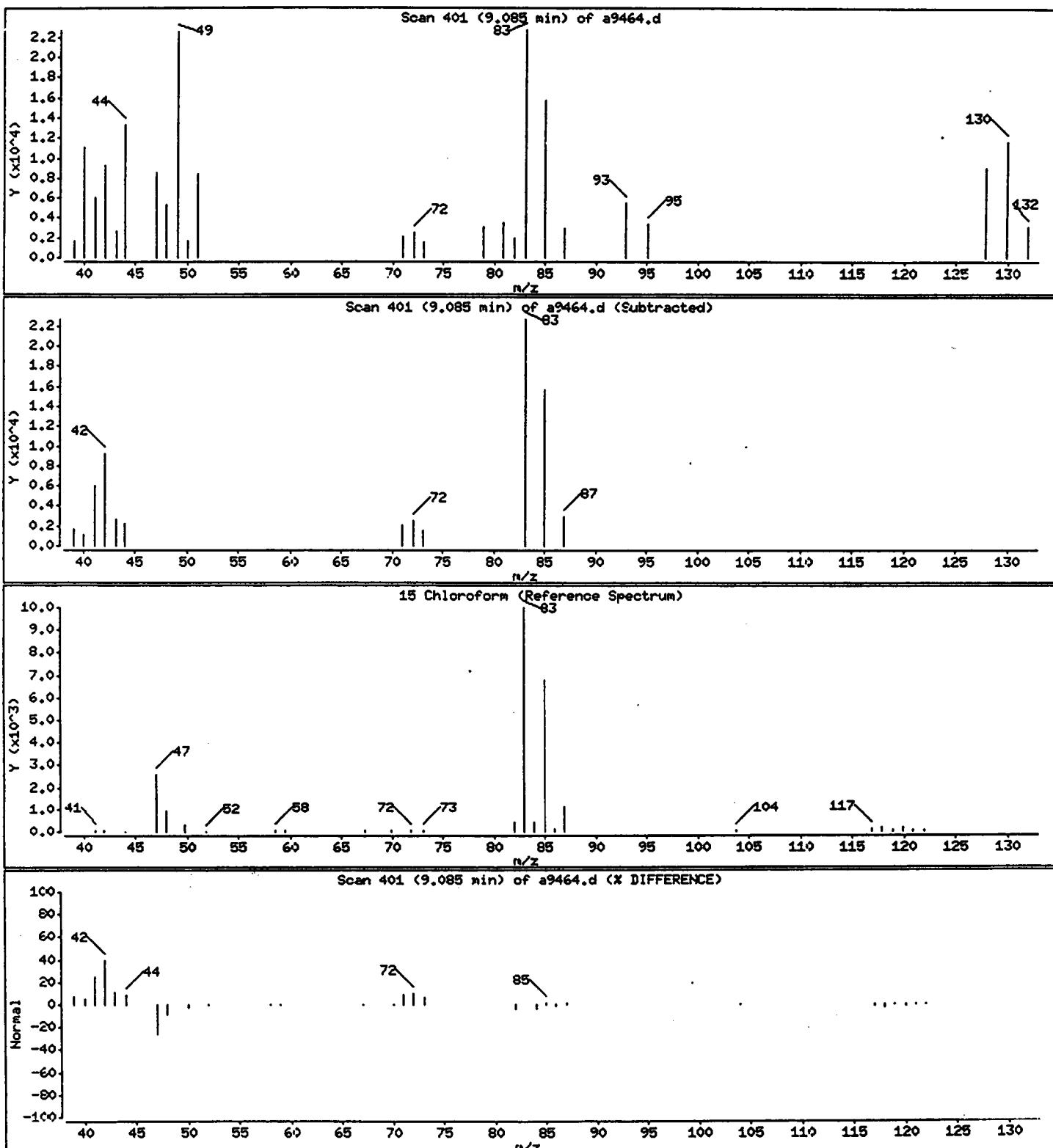
Sample Info: 96873;;11.5;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

15 Chloroform



Data File: /chem/VOAMS1.i/824CL04/06-06-97/13jun97.b/a9464.d

Date : 13-JUN-97 13:52:00

Client ID: PX-8

Instrument: VOAMS1.i

Sample Info: 96873;;11.5;5;5

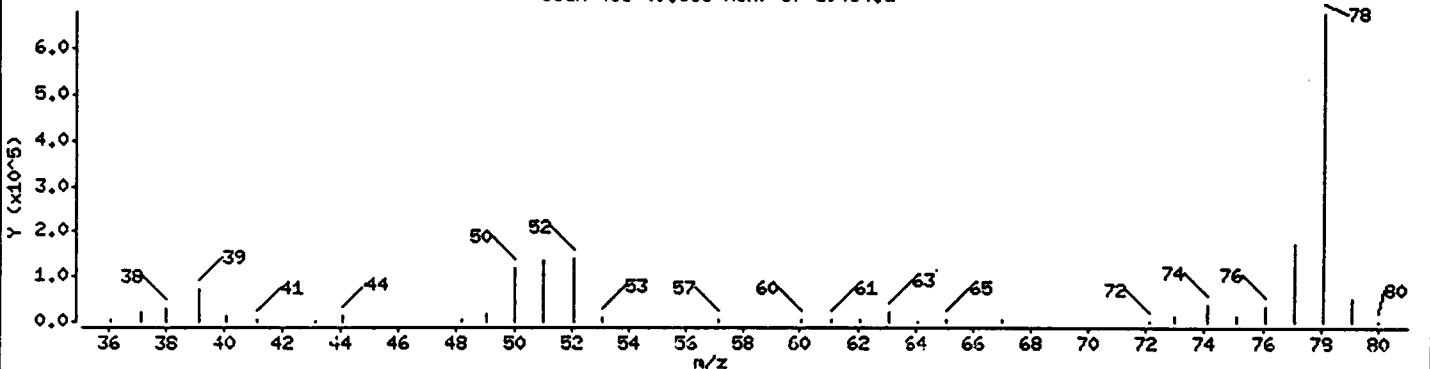
Operator: VOAMS 5

Column phase: DB624

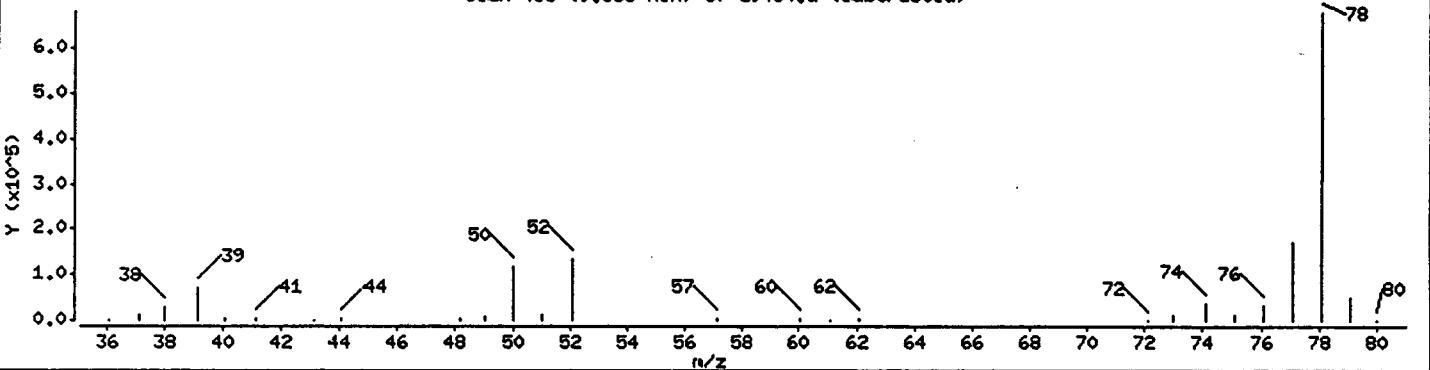
Column diameter: 0.53

28 Benzene

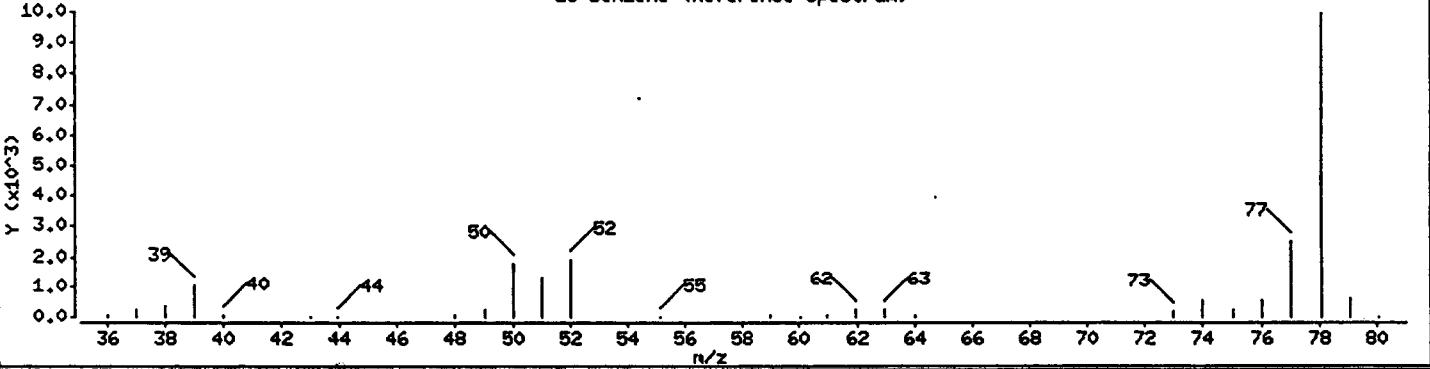
Scan 455 (9.883 min) of a9464.d



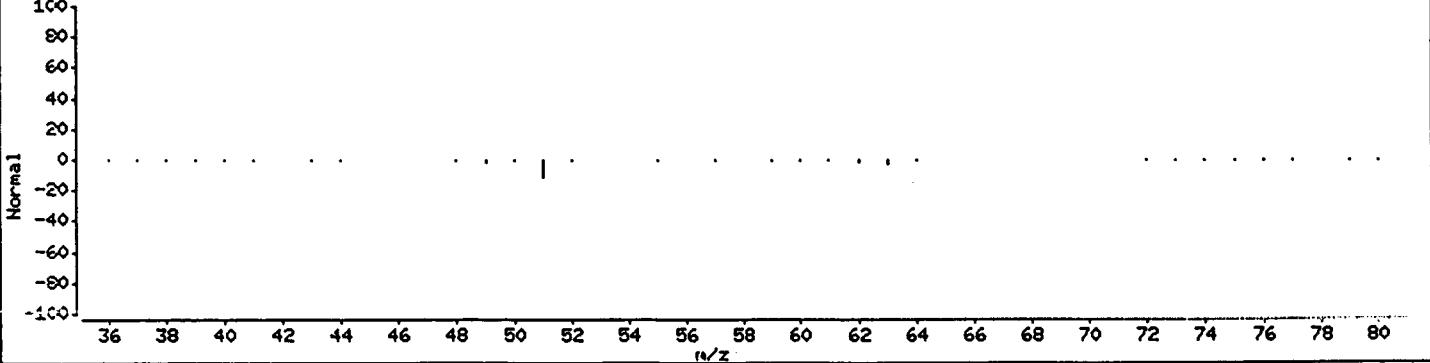
Scan 455 (9.883 min) of a9464.d (Subtracted)



28 Benzene (Reference Spectrum)



Scan 455 (9.883 min) of a9464.d (% DIFFERENCE)



Data File: /chem/VOAMS1.i/8240L04/06-C6-97/13jun97.b/a9464.d

Date : 13-JUN-97 13:52:00

Client ID: PX-8

Instrument: VOAMS1.i

Sample Info: 96873;;11.5;S;5

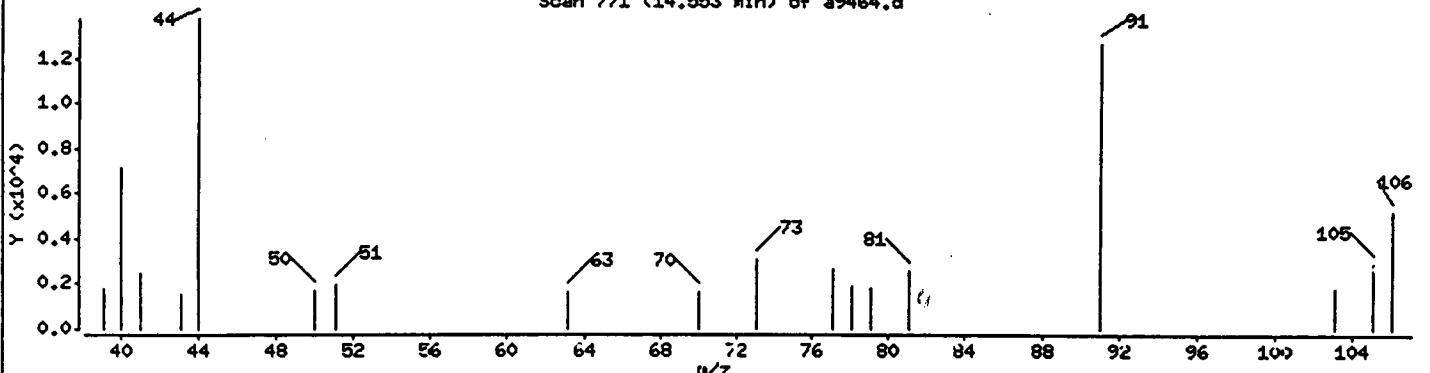
Operator: VOAMS 5

Column phase: DB624

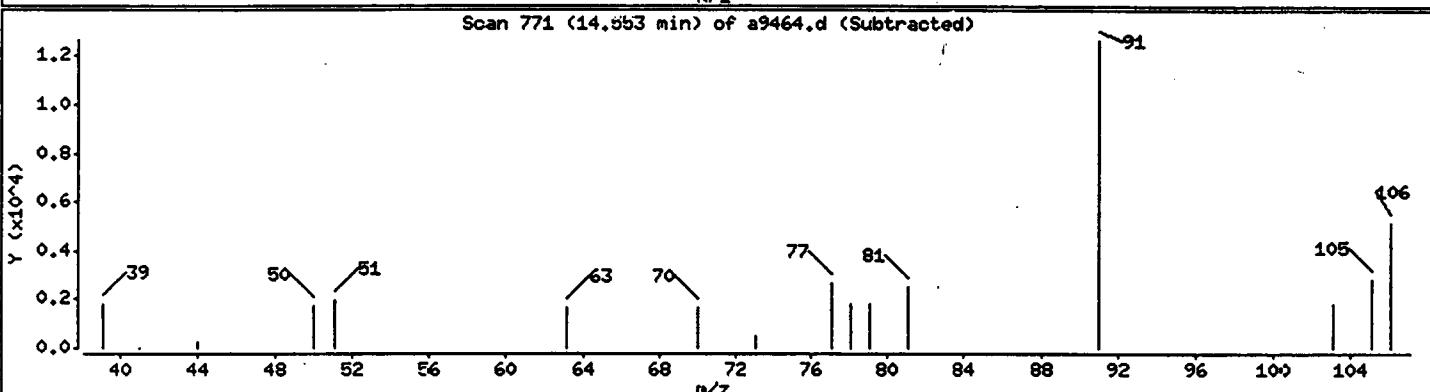
Column diameter: 0.53

44 o-Xylene

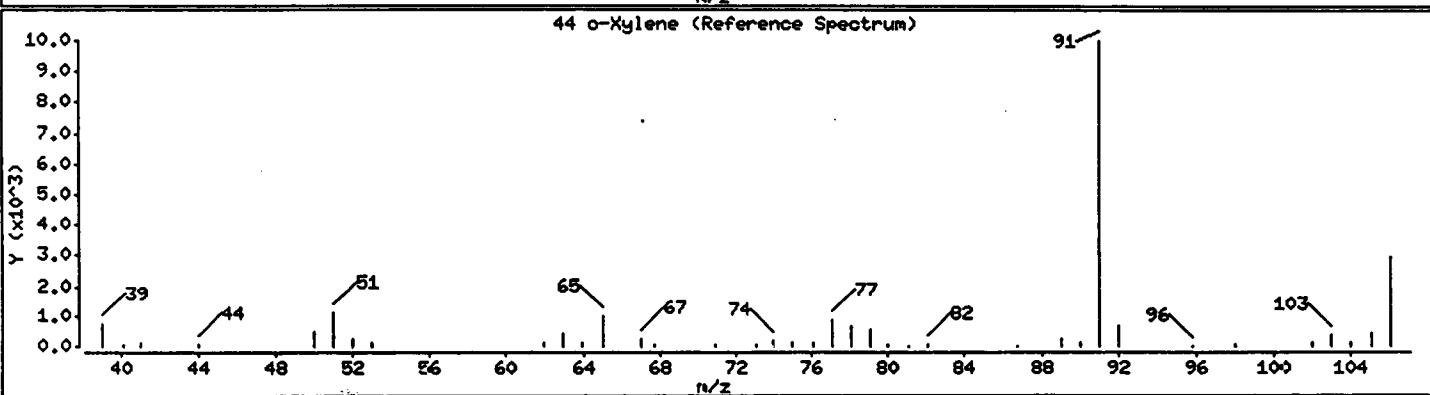
Scan 771 (14.553 min) of a9464.d



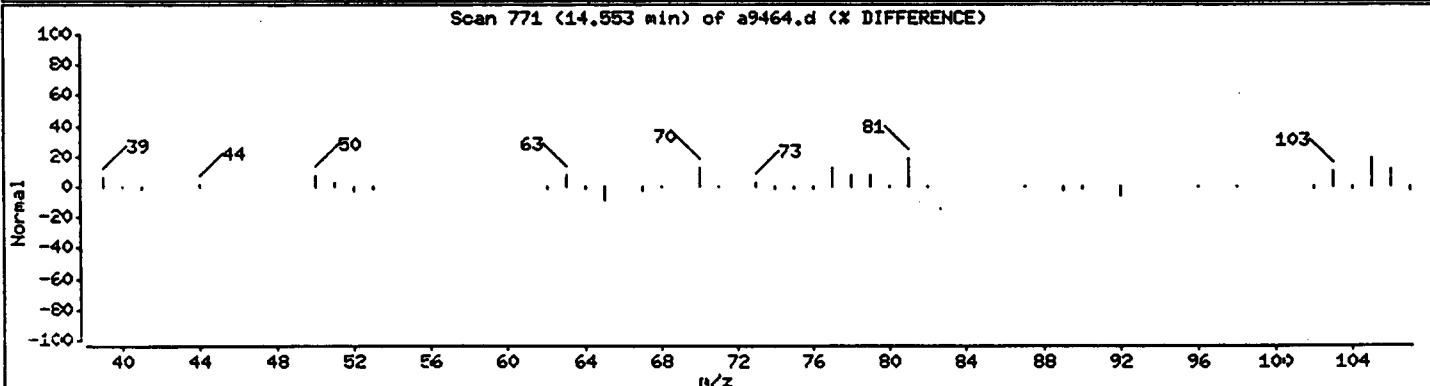
Scan 771 (14.553 min) of a9464.d (Subtracted)



44 o-Xylene (Reference Spectrum)



Scan 771 (14.553 min) of a9464.d (% DIFFERENCE)



Data File: /chem/VOAMS1.i /824CL04/06-06-97/13jun97.b/a9464.d

Date : 13-JUN-97 13:52:00

Client ID: PX-8

Instrument: VOAMS1.i

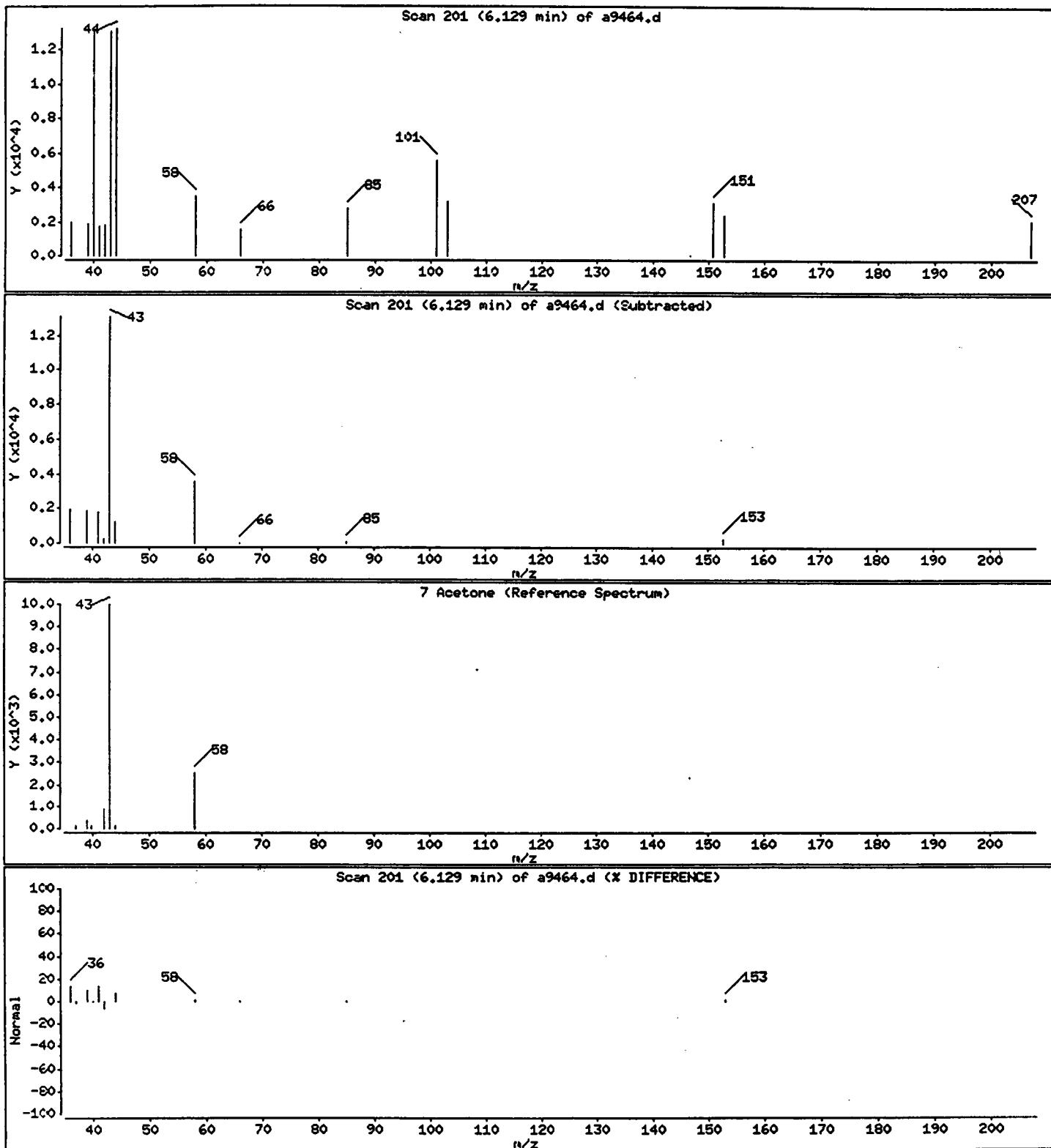
Sample Info: 96873;;11.5;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

7 Acetone



Data File: /chem/VOAMS1.i/8240LOH/06-06-97/13jun97.b/a9464.d

Date : 13-JUN-97 13:52:00

Client ID: PX-8

Instrument: VOAMS1.i

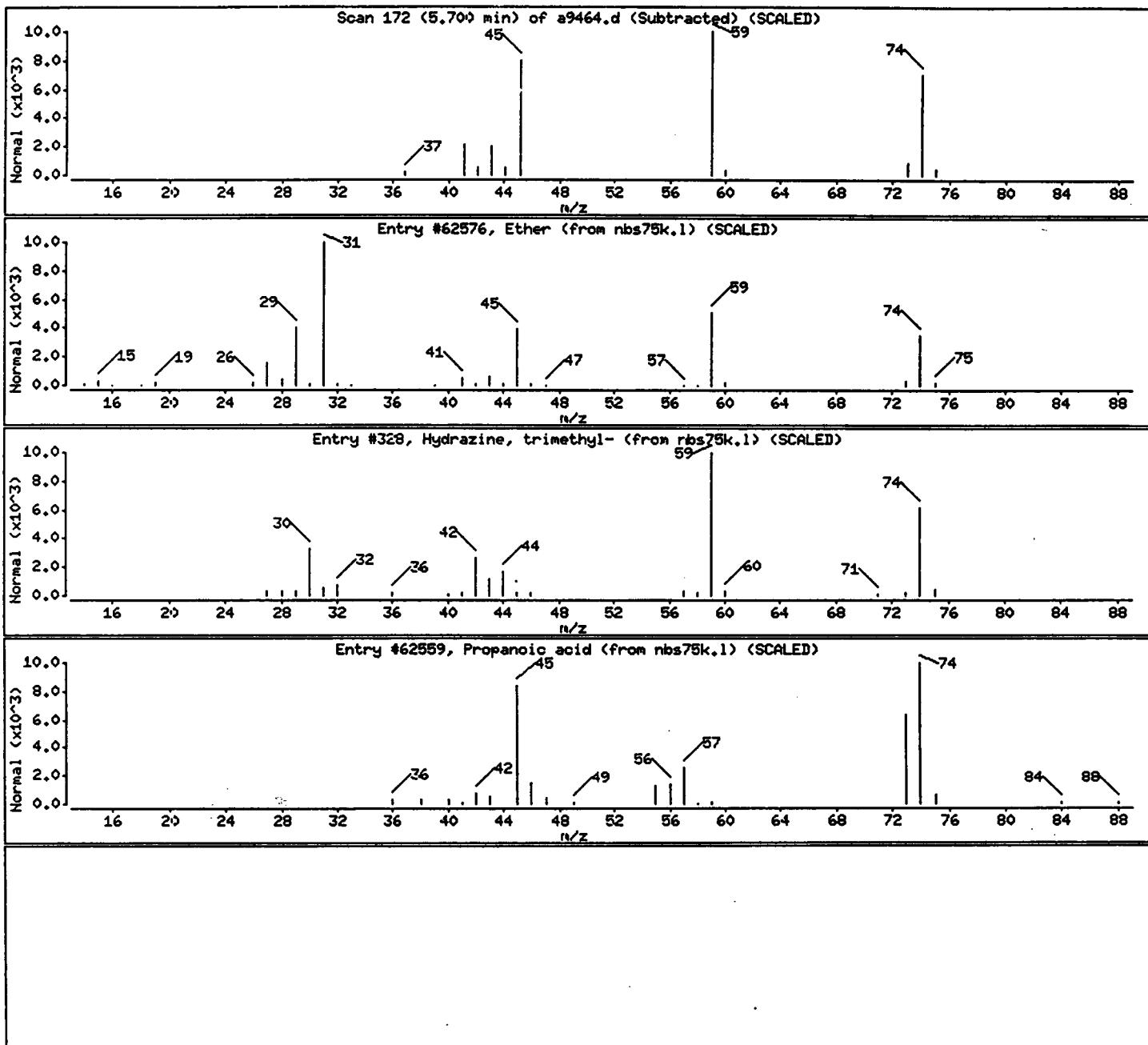
Sample Info: 96873;;11.5;5;5

Operator: VOAMS 5

Column phase: DB624

Column diameter: 0.53

Library Search Compound Hatch	CAS Number	Library	Entry	Quality	Formula	Weight
Ether	60-29-7	nbs75k.1	62576	90	C4H10O	74
Hydrazine, trimethyl-	1741-01-1	nbs75k.1	328	28	C3H10N2	74
Propanoic acid	79-09-4	nbs75k.1	62559	25	C3H6O2	74



VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab File ID: A9404

BFB Injection Date: 06/06/97

Instrument ID: VOAMS1

BFB Injection Time: 1027

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.6
75	30.0 - 60.0% of mass 95	46.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 1.0% of mass 95	0.0
174	50.0 - 100.0% of mass 95	57.4
175	5.0 - 9.0% of mass 174	4.4 (7.7)1
176	95.0 - 101.0% of mass 174	55.9 (97.4)1
177	5.0 - 9.0% of mass 176	3.7 (6.7)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

CLIENT ID	LAB SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01 ASTD050	ASTD050	A9405	06/06/97	1054
02 ASTD200	ASTD200	A9406	06/06/97	1139
03 ASTD100	ASTD100	A9407	06/06/97	1208
04 ASTD020	ASTD020	A9408	06/06/97	1237
05 ASTD010	ASTD010	A9409	06/06/97	1306
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

Data File: /chem/VOAMS1.i/8240LOU/06-06-97/06jun97.b/a9404.d

Date : 06-JUN-97 10:27:00

Client ID: ABFB157 50ng

Instrument: VOAMS1.i

Sample Info: ABFB157 50ng

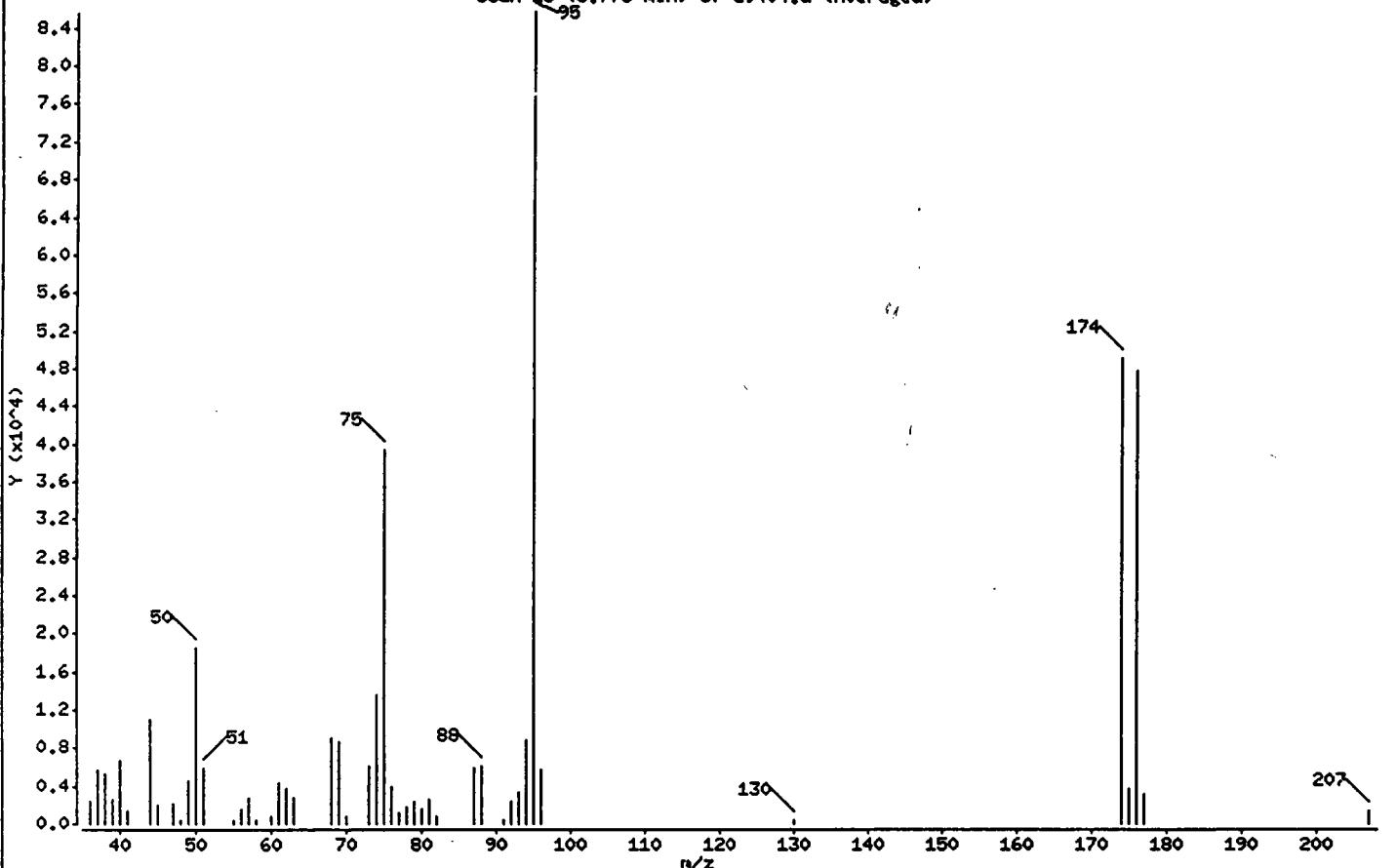
Operator: VOAMS 1

Column phase: DB-624

Column diameter: 0.53

1 Bromofluorobenzene

Scan 25 (8.775 min) of a9404.d (Averaged)



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
		ABUNDANCE	
95	Base Peak, 100% relative abundance	100.00	
50	15.00 - 40.00% of mass 95	21.58	
75	30.00 - 60.00% of mass 95	46.05	
96	5.00 - 9.00% of mass 95	6.74	
173	Less than 1.00% of mass 95	0.00	
174	50.00 - 100.00% of mass 95	57.37	
175	5.00 - 9.00% of mass 174	4.42 (< 7.70)	
176	95.00 - 101.00% of mass 174	55.90 (> 97.44)	
177	5.00 - 9.00% of mass 176	3.74 (< 6.68)	

Data File: /chem/VOAMS1.i/8240LOU/06-06-97/06Jun97.b/a9404.d

Date : 06-JUN-97 10:27:00

Client ID: ABFB157 50ng

Instrument: VOAMS1.i

Sample Info: ABFB157 50ng

Operator: VOAMS 1.

Column phase: DB-624

Column diameter: 0.53

Data File: a9404.d

Spectrum: Scan 26 (8.775 min) of a9404.d (Averaged)

Location of Maximum: 95.00

Number of points: 48

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2403	55.00	418	75.00	39384	94.00	8871
37.00	5617	56.00	1517	76.00	3909	95.00	88533
38.00	5241	57.00	2813	77.00	1107	96.00	5768
39.00	2574	58.00	387	78.00	1790	130.00	346
40.00	6663	60.00	740	79.00	2390	174.00	49069
41.00	1419	61.00	4394	80.00	1566	175.00	3780
44.00	11090	62.00	3767	81.00	2644	176.00	47813
45.00	1909	63.00	2809	82.00	831	177.00	3195
47.00	2176	68.00	9116	87.00	5849	207.00	1397
48.00	422	69.00	8623	88.00	6006		
49.00	4526	70.00	744	91.00	437		
50.00	18461	73.00	6156	92.00	2300		
51.00	5964	74.00	13658	93.00	3253		

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/06jun97.b/a9404.d

Date : 06-JUN-97 10:27:00

Client ID: ABFB157 50ng

Instrument: VOAMS1.i

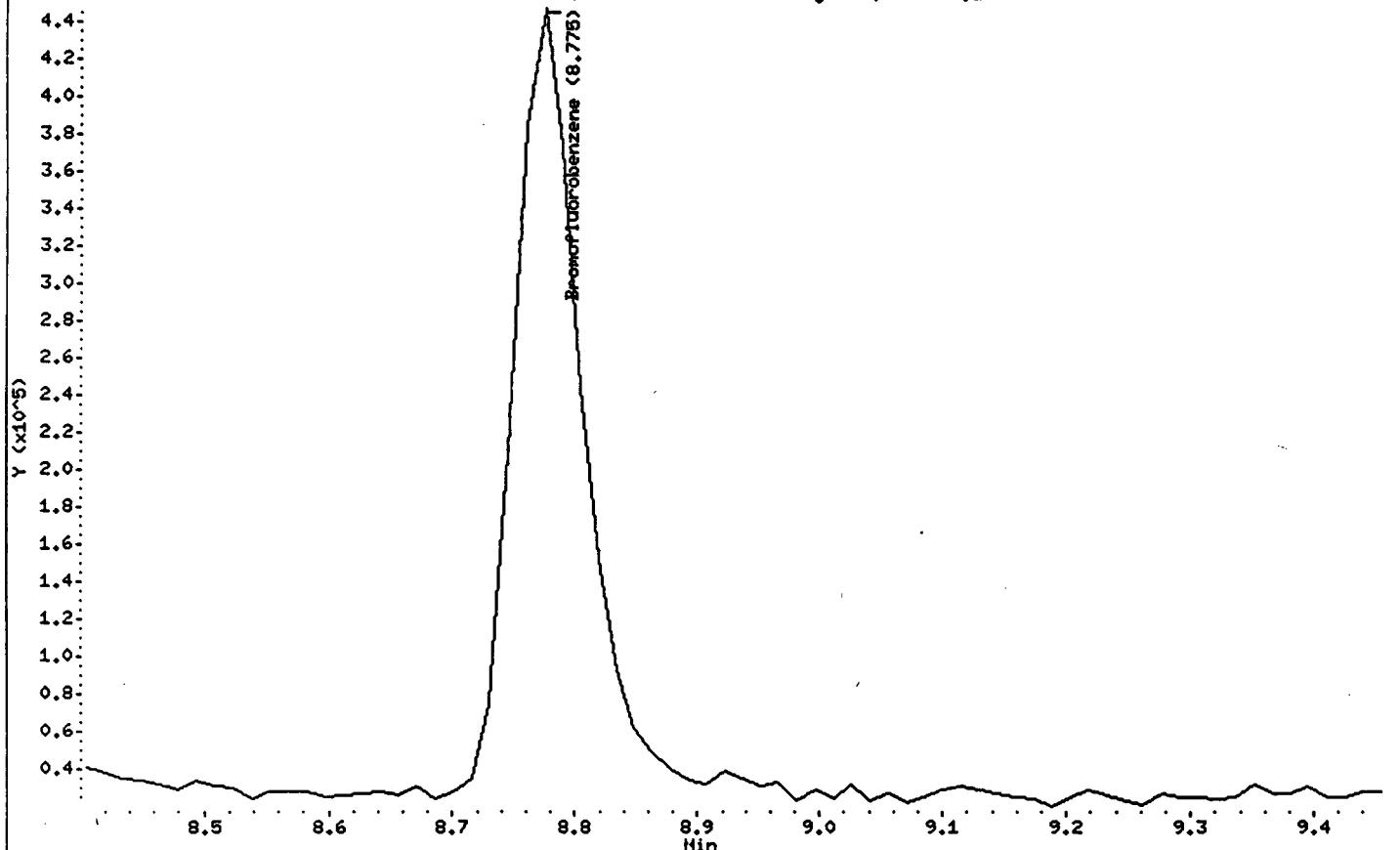
Sample Info: ABFB157 50ng

Operator: VOAMS 1

Column phase: DB-624

Column diameter: 0.53

/chem/VOAMS1.i/8240LOW/06-06-97/06jun97.b/a9404.d



VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab File ID: A9456

BFB Injection Date: 06/13/97

Instrument ID: VOAMS1

BFB Injection Time: 0847

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.7 23.2
75	30.0 - 60.0% of mass 95	47.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.9
173	Less than 1.0% of mass 95	0.0
174	50.0 - 100.0% of mass 95	52.3
175	5.0 - 9.0% of mass 174	3.9 (7.4)1
176	95.0 - 101.0% of mass 174	52.3 (100.1)1
177	5.0 - 9.0% of mass 176	3.4 (6.5)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

CLIENT ID	LAB SAMPLE No.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01 ASTD164	ASTD164	A9457	06/13/97	0928
02 AV164	AV164	A9458	06/13/97	1019
03 PX-3	96868	A9459	06/13/97	1119
04 PX-4	96869	A9460	06/13/97	1148
05 PX-5	96870	A9461	06/13/97	1218
06 PX-6	96871	A9462	06/13/97	1253
07 PX-7	96872	A9463	06/13/97	1322
08 PX-8	96873	A9464	06/13/97	1352
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

Data File: /chem/VOAMS1.i/8240LOW/06-C6-97/13jun97.b/a9456.d

Date : 13-JUN-97 08:47:00

Client ID:

Instrument: VOAMS1.i

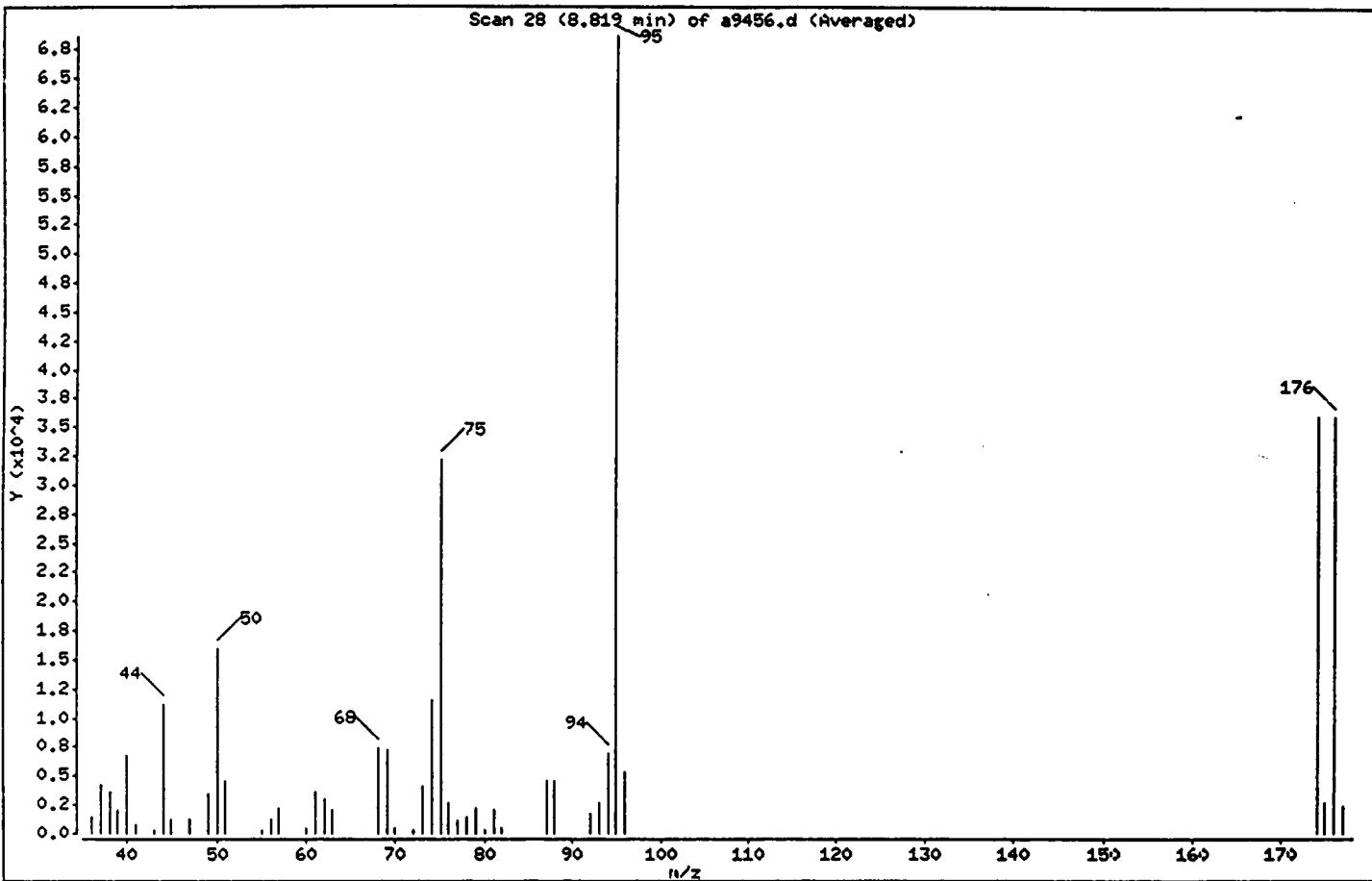
Sample Info: ABFB164 50ng

Operator: VOAMS 1

Column phase: DB-624

1 Bromofluorobenzene

Column diameter: 0.53



n/e	ION ABUNDANCE CRITERIA	* RELATIVE ABUNDANCE
95 Base Peak, 100% relative abundance	100.00	
50 15.00 - 40.00% of mass 95	21.73	
75 30.00 - 60.00% of mass 95	46.98	
96 5.00 - 9.00% of mass 95	7.86	
173 Less than 1.00% of mass 95	0.00	
174 50.00 - 100.00% of mass 95	52.30	
175 5.00 - 9.00% of mass 174	3.87 (< 7.40)	
176 95.00 - 101.00% of mass 174	52.34 (100.08)	
177 5.00 - 9.00% of mass 176	3.42 (< 6.53)	

Data File: /chem/VOAMS1.i/824CLOH/06-06-97/13jun97.b/a9456.d

Date : 13-JUN-97 08:47:00

Client ID:

Instrument: VOAMS1.i

Sample Info: ABFB164 50ng

Operator: VOAMS 1

Column phase: DB-624

Column diameter: 0.53

Data File: a9456.d

Spectrum: Scan 29 (8.819 min) of a9456.d (Averaged)

Location of Maximum: 95.00

Number of points: 45

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1430	51.00	4614	73.00	4132	92.00	1799
37.00	4322	55.00	391	74.00	11502	93.00	2745
38.00	3607	56.00	1328	75.00	32256	74.00	6953
39.00	2079	57.00	2146	76.00	2730	95.00	68666
40.00	6777	60.00	484	77.00	1136	96.00	5399
41.00	857	61.00	3664	78.00	1343	17.00	35912
43.00	341	62.00	3070	79.00	2239	177.00	2658
44.00	11195	63.00	2121	80.00	350	176.00	35941
45.00	1207	68.00	7449	81.00	2035	177.00	2347
47.00	1328	69.00	7242	82.00	410		
49.00	3504	70.00	503	87.00	4544		
50.00	15984	72.00	373	88.00	4552		

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9456.d

Date : 13-JUN-97 08:47:00

Client ID:

Instrument: VOAMS1.i

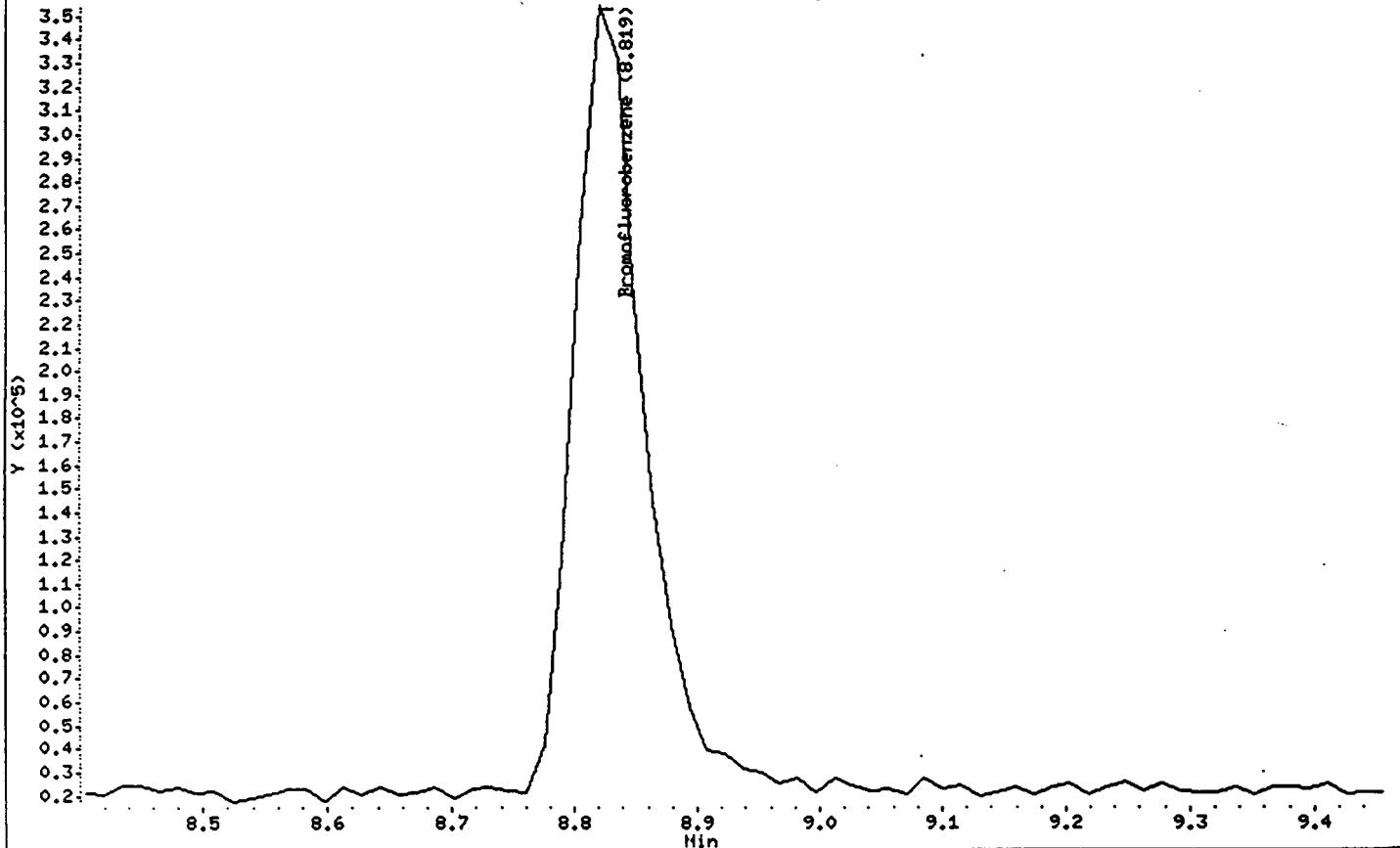
Sample Info: ABFB164 50ng

Operator: VOAMS 1

Column phase: DB-624

Column diameter: 0.53

/chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9456.d



VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab File ID: C2689

BFB Injection Date: 05/24/97

Instrument ID: VOAMS3

BFB Injection Time: 1058

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.4
75	30.0 - 60.0% of mass 95	47.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.9
173	Less than 1.0% of mass 95	0.0
174	50.0 - 100.0% of mass 95	68.3
175	5.0 - 9.0% of mass 174	5.1 (7.4)1
176	95.0 - 101.0% of mass 174	65.6 (96.0)1
177	5.0 - 9.0% of mass 176	5.5 (8.4)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT ID	LAB SAMPLE No.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CSTD200	CSTD200	C2690	05/24/97	1121
02	CSTD100	CSTD100	C2691	05/24/97	1149
03	CSTD050	CSTD050	C2692	05/24/97	1218
04	CSTD020	CSTD020	C2693	05/24/97	1247
05	CSTD010	CSTD010	C2694	05/24/97	1316
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

Date : 24-MAY-97 10:58:00

Client ID: CBFB144 50ng

Instrument: VOAMS3.i

Sample Info: CBFB144 50ng

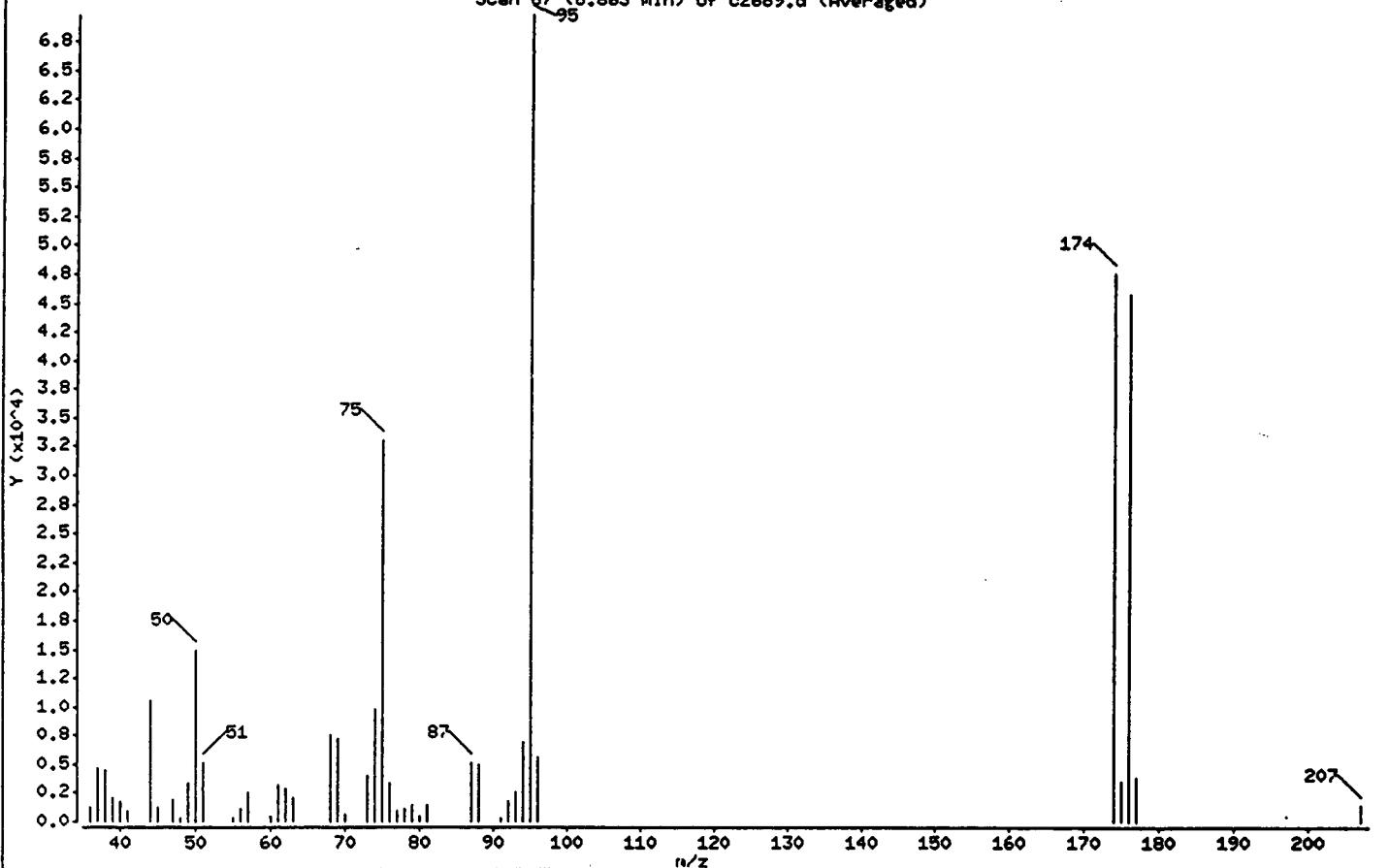
Operator: VOAMS 3

Column phase: DB-624

Column diameter: 0.53

1 Bromofluorobenzene

Scan 87 (8.863 min) of c2689.d (Averaged)



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.41
75	30.00 - 60.00% of mass 95	47.26
96	5.00 - 9.00% of mass 95	7.93
173	Less than 1.00% of mass 95	0.00
174	50.00 - 100.00% of mass 95	68.34
175	5.00 - 9.00% of mass 174	5.09 (< 7.45)
176	95.00 - 101.00% of mass 174	65.63 (< 96.04)
177	5.00 - 9.00% of mass 176	5.51 (< 8.39)

Date : 24-MAY-97 10:58:00

Client ID: CBFBI44 50ng

Instrument: VOAMS3.i

Sample Info: CBFBI44 50ng

Operator: VOAMS 3

Column phase: DB-624

Column diameter: 0.53

Data File: c2689.d

Spectrum: Scan 88 (8.863 min) of c2689.d (Averaged)

Location of Maximum: 95.00

Number of points: 45

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1285	51.00	5064	74.00	9806	93.00	2505
37.00	4680	55.00	259	75.00	32981	94.00	6925
38.00	4537	56.00	1095	76.00	3377	95.00	69789
39.00	2140	57.00	2533	77.00	954	96.00	5535
40.00	1754	60.00	459	78.00	1115	174.00	47693
41.00	916	61.00	3264	79.00	1375	175.00	3552
44.00	10652	62.00	2884	80.00	535	176.00	45805
45.00	1212	63.00	2127	81.00	1410	177.00	3845
47.00	2003	68.00	7617	87.00	5074	207.00	1416
48.00	290	69.00	7240	88.00	5031		
49.00	3324	70.00	565	91.00	261		
50.00	14942	73.00	3958	92.00	1746		

Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/24may97.b/c2689.d

Page 2

Date : 24-MAY-97 10:58:00

Client ID: CBFBI44 50ng

Instrument: VOAMS3.i

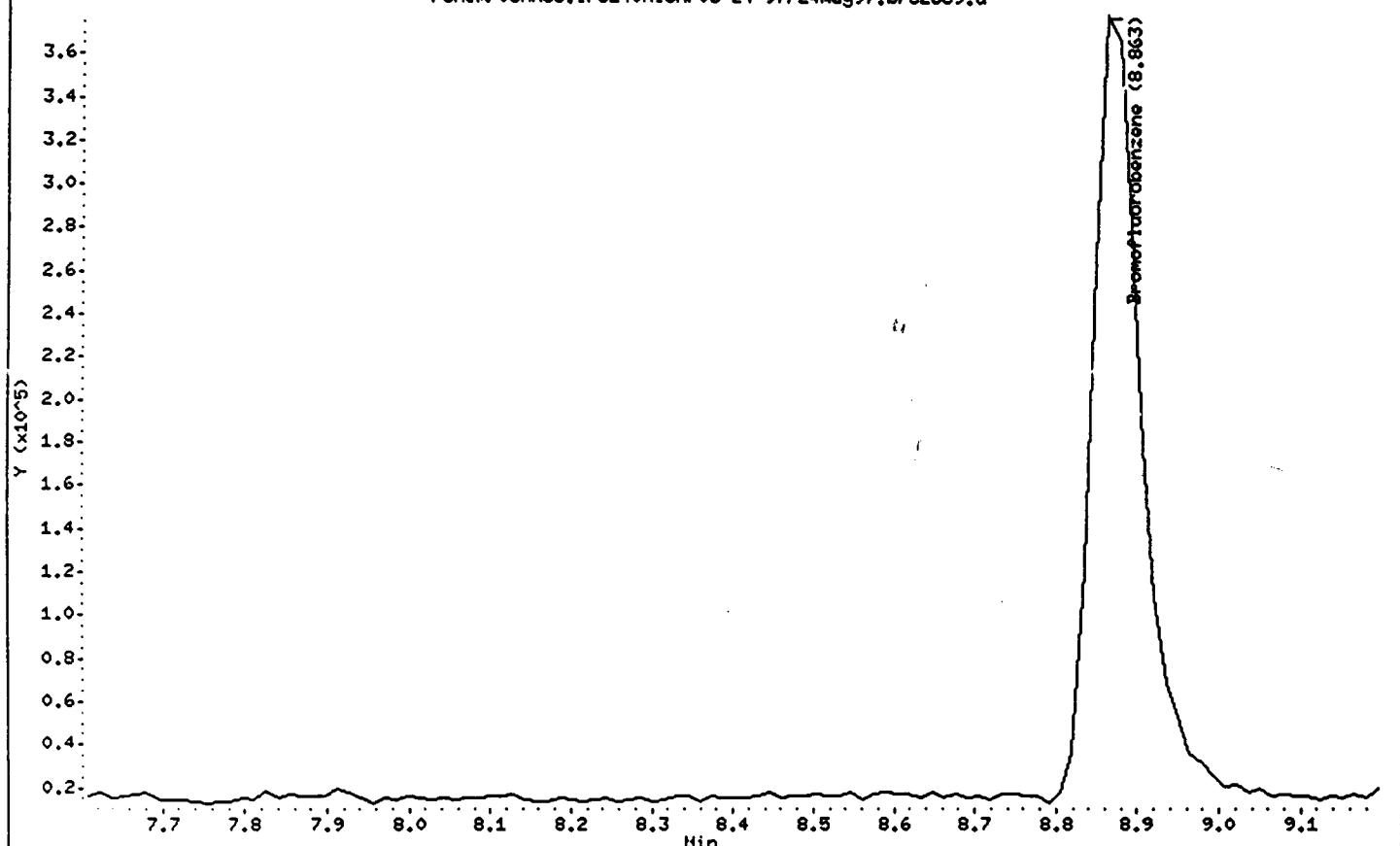
Sample Info: CBFBI44 50ng

Operator: VOAMS 3

Column phase: DB-624

Column diameter: 0.53

/chem/VOAMS3.i/8240HIGH/05-24-97/24may97.b/c2689.d



VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab File ID: C3056

BFB Injection Date: 06/13/97

Instrument ID: VOAMS3

BFB Injection Time: 0828

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.3
75	30.0 - 60.0% of mass 95	45.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.4
173	Less than 1.0% of mass 95	0.0
174	50.0 - 100.0% of mass 95	66.4
175	5.0 - 9.0% of mass 174	5.1 (7.6)1
176	95.0 - 101.0% of mass 174	65.0 (97.9)1
177	5.0 - 9.0% of mass 176	4.8 (7.3)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

CLIENT ID	LAB SAMPLE No.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01 CSTD164	CSTD164	C3057	06/13/97	0844
02 CV164B	CV164B	C3059	06/13/97	0947
03 PX-1	96866	C3061	06/13/97	1156
04 PX-2	96867	C3062	06/13/97	1225
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

Data File: /chem/VOAMS3.i/824CHIGH/05-24-97/13jun97.b/c3056.d

Page 2

Date : 13-JUN-97 08:28:00

Client ID: CBFB164 50ng

Instrument: VOAMS3.i

Sample Info: CBFB164 50ng

Operator: VOAMS 3

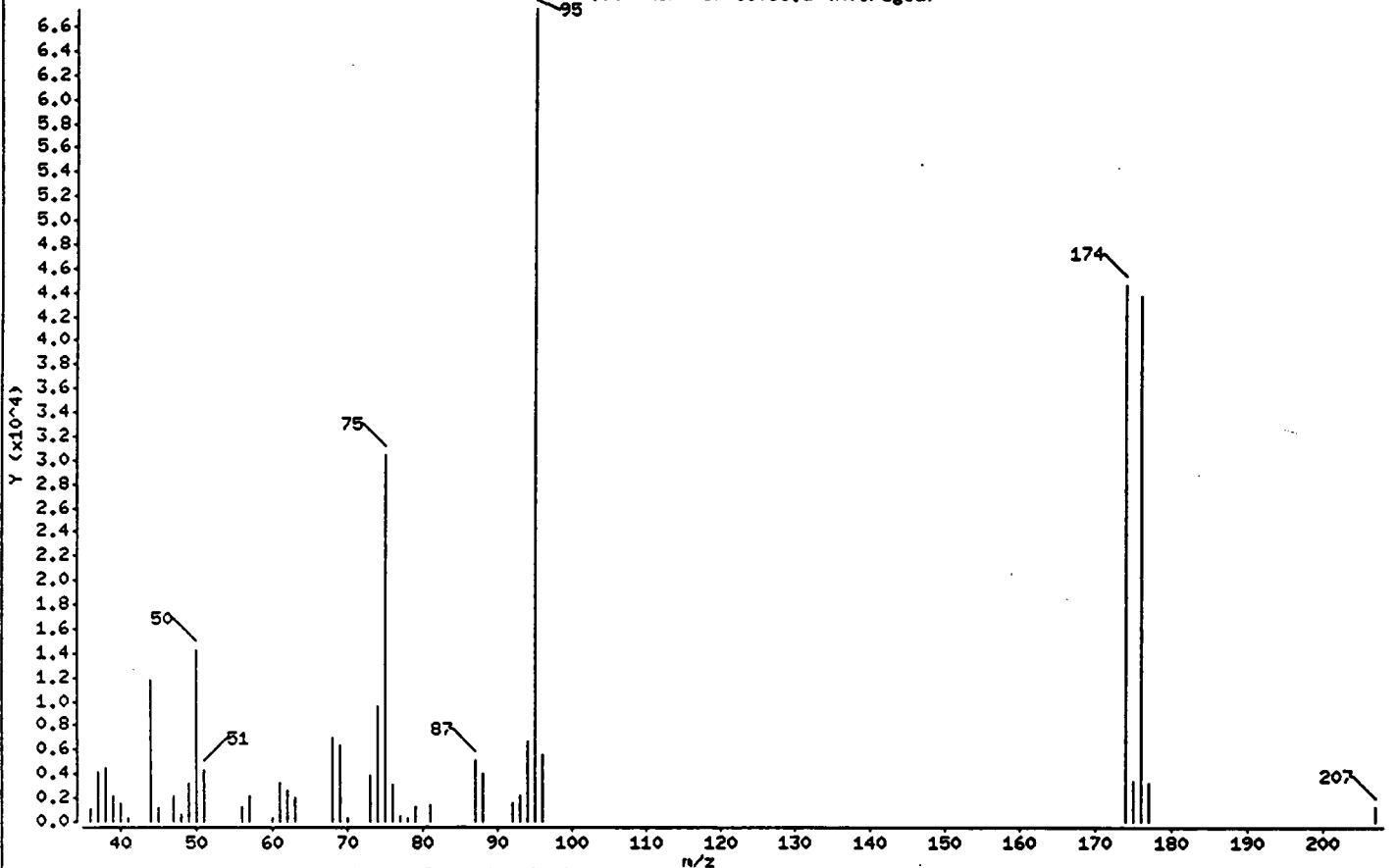
Column phase: DB-624

Column diameter: 0.53

1 Bromofluorobenzene

Scan 94 (8.964 min) of c3056.d (Averaged)

95



m/e	ION ABUNDANCE CRITERIA	X RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.27
75	30.00 - 60.00% of mass 95	45.16
96	5.00 - 9.00% of mass 95	8.38
173	Less than 1.00% of mass 95	0.00
174	50.00 - 100.00% of mass 95	66.37
175	5.00 - 9.00% of mass 174	5.07 < 7.64
176	95.00 - 101.00% of mass 174	64.96 < 97.88
177	5.00 - 9.00% of mass 176	4.77 < 7.34

Date : 13-JUN-97 08:28:00

Client ID: CBFBI64 50ng

Instrument: VOAMS3.i

Sample Info: CBFBI64 50ng

Operator: VOAMS 3

Column phase: DB-624

Column diameter: 0.53

Data File: c3056.d

Spectrum: Scan 95 (8.964 min) of c3056.d (Averaged)

Location of Maximum: 95.00

Number of points: 42

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1153	50.00	14338	73.00	3806	93.00	2215
37.00	4176	51.00	4426	74.00	9557	94.00	6726
38.00	4481	56.00	1225	75.00	30440	95.00	67400
39.00	2222	57.00	2124	76.00	3045	96.00	5647
40.00	1581	60.00	260	77.00	485	174.00	44733
41.00	290	61.00	3227	78.00	341	175.00	3419
44.00	11850	62.00	2592	79.00	1167	176.00	43786
45.00	1241	63.00	2049	81.00	1351	177.00	3214
47.00	2210	68.00	7022	87.00	5119	207.00	1275
48.00	580	69.00	6427	88.00	3966		
49.00	3262	70.00	273	92.00	1624		

Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3056.d

Page 1

Date : 13-JUN-97 08:28:00

Client ID: CBFB164 50ng

Instrument: VOAMS3.i

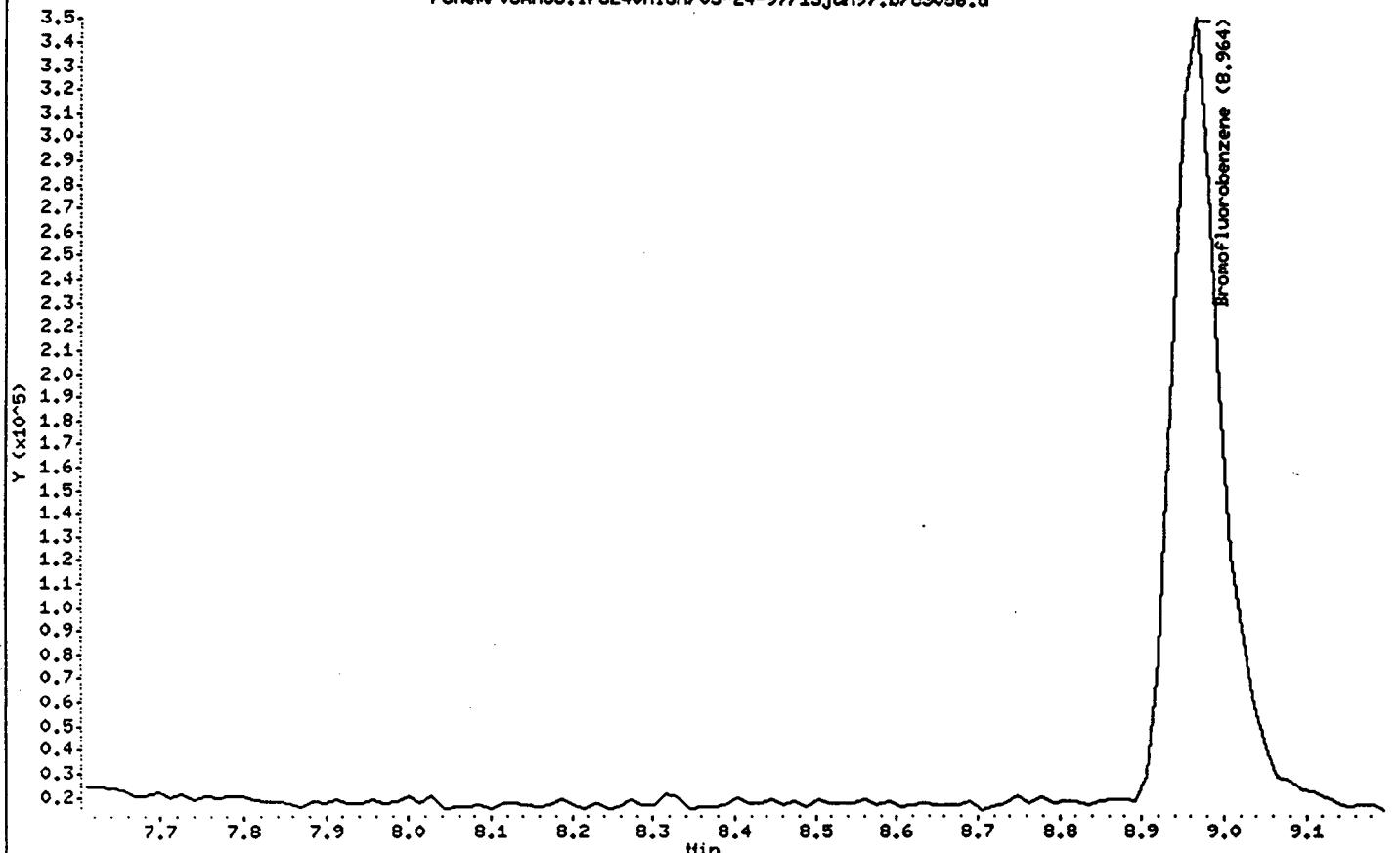
Sample Info: CBFB164 50ng

Operator: VOAMS 3

Column phase: DB-624

Column diameter: 0.53

/chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3056.d



SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab File ID: T1197

DFTPP Injection Date: 06/02/97

Instrument ID: BNAMS3

DFTPP Injection Time: 1215

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	63.1
70	Less than 2.0% of mass 69	0.1 (0.2)1
127	40.0 - 60.0% of mass 198	52.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	18.6
365	Greater than 1.0% of mass 198	2.17
441	0.0 - 100.0% of mass 443	13.9 (75.4)2
442	40.0 - 110.0% of mass 198	93.8
443	17.0 - 23.0% of mass 442	18.4 (19.7)3

1-Value is % mass 69

2-Value is % mass 443

3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT ID	LAB SAMPLE No.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	TSTD050	TSTD050	T1198	06/02/97	1233
02	TSTD120	TSTD120	T1200	06/02/97	1404
03	TSTD080	TSTD080	T1201	06/02/97	1450
04	TSTD020	TSTD020	T1202	06/02/97	1536
05	TSTD010-S	TSTD010-S	T1203	06/02/97	1623
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					

Data File: /chem/BNAMS3.i/8270/06-02-97/02june97.b/t1197.d

Date : 02-JUN-97 12:15:00

Client ID:

Instrument: BNAMS3.i

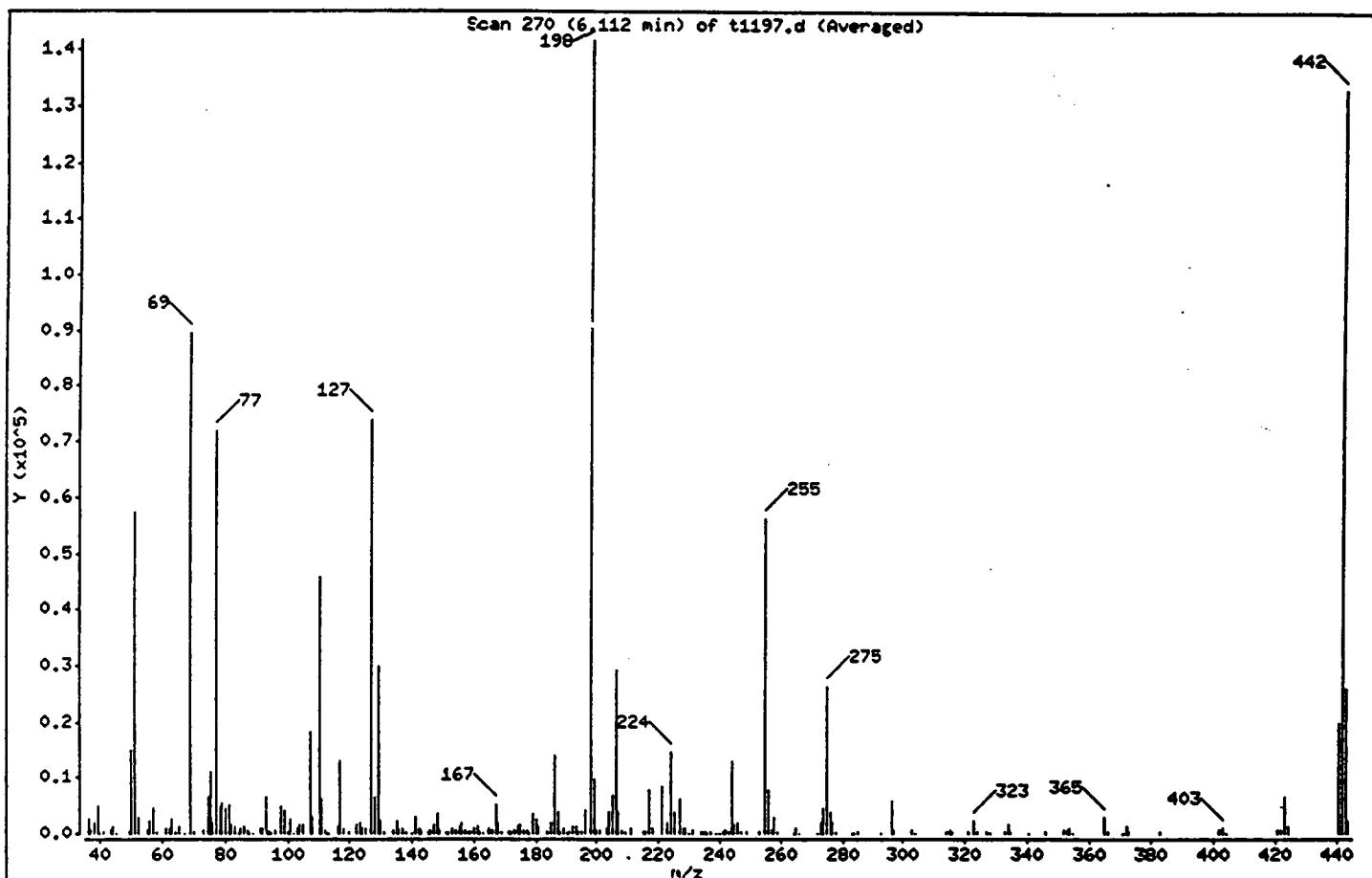
Sample Info: TDFT153

Column phase: DB-5

1 dftpp

Operator: BNAMS 3

Column diameter: 0.25



n/e	ION ABUNDANCE CRITERIA	<i>Cecy</i> -	X RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance		100.00
51	30.00 - 60.00% of mass 198		40.44
68	Less than 2.00% of mass 69		0.00 < 0.00
69	Mass 69 relative abundance		63.12
70	Less than 2.00% of mass 69		0.15 < 0.24
127	40.00 - 60.00% of mass 198		52.11
197	Less than 1.00% of mass 198		0.00
199	5.00 - 9.00% of mass 198		6.78
275	10.00 - 30.00% of mass 198		18.62
365	Greater than 1.00% of mass 198		2.17
441	0.01 - 100.00% of mass 443		13.91 < 75.43
442	40.00 - 110.00% of mass 198		93.81
443	17.00 - 23.00% of mass 442		18.44 < 19.66

Data File: /chem/BNAMS3.i/8270/06-02-97/02june97.b/t1197.d

Date : 02-JUN-97 12:15:00

Client ID:

Instrument: BNAMS3.i

Sample Info: TDFT153

Operator: BNAMS 3

Column phase: DB-5

Column diameter: 0.25

Data File: t1197.d

Spectrum: Scan 271 (6.112 min) of t1197.d (Averaged)

Location of Maximum: 198.00

Number of points: 228

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2704	110.00	45973	180.00	2469	258.00	2914
37.00	496	111.00	6328	181.00	1320	259.00	250
38.00	2017	112.00	616	184.00	187	264.00	100
39.00	4832	113.00	152	185.00	2037	265.00	1085
40.00	142	116.00	1280	186.00	14091	266.00	129
41.00	445	117.00	13085	187.00	3810	272.00	101
43.00	575	118.00	958	188.00	373	273.00	1816
44.00	1421	120.00	163	189.00	921	274.00	4580
45.00	145	122.00	1494	190.00	129	275.00	26385
49.00	430	123.00	2034	191.00	400	276.00	3767
50.00	14861	124.00	1034	192.00	1343	277.00	1887
51.00	57301	125.00	1009	193.00	1315	278.00	249
52.00	2864	127.00	73832	194.00	333	283.00	132
55.00	609	128.00	6372	195.00	276	284.00	140
56.00	2345	129.00	29945	196.00	4290	285.00	242
57.00	4680	130.00	2425	198.00	141698	293.00	130
58.00	255	131.00	391	199.00	9614	296.00	5832
61.00	850	134.00	602	200.00	659	297.00	730
62.00	854	135.00	2338	201.00	629	303.00	733
63.00	2709	136.00	583	203.00	845	304.00	118
64.00	370	137.00	1116	204.00	3853	314.00	286
65.00	1176	138.00	246	205.00	6866	315.00	659
67.00	101	140.00	135	206.00	29298	316.00	339
69.00	89437	141.00	2863	207.00	3868	321.00	228
70.00	212	142.00	919	208.00	776	323.00	2174
73.00	813	143.00	647	209.00	236	324.00	364
74.00	6573	145.00	145	211.00	1064	327.00	312
75.00	11166	146.00	616	215.00	291	328.00	104
76.00	2009	147.00	1502	216.00	314	333.00	349
77.00	71917	148.00	3455	217.00	7861	334.00	1530
78.00	5004	149.00	621	218.00	925	335.00	278
79.00	5412	151.00	433	221.00	8362	341.00	138
80.00	4434	152.00	138	223.00	2000	346.00	304
81.00	5361	153.00	902	224.00	14499	352.00	727
82.00	1527	154.00	541	225.00	3892	353.00	697

Data File: /chem/BNAMS3.i/8270/06-02-97/02june97.b/t1197.d

Date : 02-JUN-97 12:15:00

Client ID:

Instrument: BNAMS3.i

Sample Info: TDFT153

Operator: BNAMS 3

Column phase: DB-5

Column diameter: 0.25

Data File: t1197.d

Spectrum: Scan 271 (6.112 min) of t1197.d (Averaged)

Location of Maximum: 198.00

Number of points: 228

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	1211 155.00	1436 227.00	6092 354.00	851			
84.00	117 156.00	2042 228.00	858 355.00	100			
85.00	1097 157.00	610 229.00	1097 365.00	3069			
86.00	1260 158.00	481 230.00	146 366.00	356			
87.00	659 159.00	336 231.00	506 371.00	103			
88.00	121 160.00	892 234.00	405 372.00	1436			
89.00	120 161.00	1288 235.00	359 373.00	299			
91.00	1113 162.00	344 236.00	156 383.00	217			
92.00	1028 163.00	122 237.00	431 402.00	560			
93.00	6595 165.00	1106 239.00	142 403.00	816			
94.00	482 166.00	739 240.00	104 404.00	153			
95.00	117 167.00	5205 241.00	333 421.00	740			
96.00	515 168.00	1908 242.00	566 422.00	536			
98.00	4896 169.00	469 243.00	417 423.00	6552			
99.00	4204 171.00	206 244.00	12884 424.00	1290			
100.00	456 172.00	425 245.00	1662 441.00	19709			
101.00	2499 173.00	594 246.00	1917 442.00	132928			
102.00	102 174.00	1173 247.00	340 443.00	26128			
103.00	1014 175.00	1629 249.00	297 444.00	2162			
104.00	1682 176.00	699 253.00	450				
105.00	1640 177.00	785 255.00	56290				
107.00	18309 178.00	120 256.00	7871				
108.00	2955 179.00	3646 257.00	578				

Data File: /chem/BNAHS3.i/8270/06-02-97/02june97.b/t1197.d

Date : 02-JUN-97 12:15:00

Client ID:

Instrument: BNAHS3.i

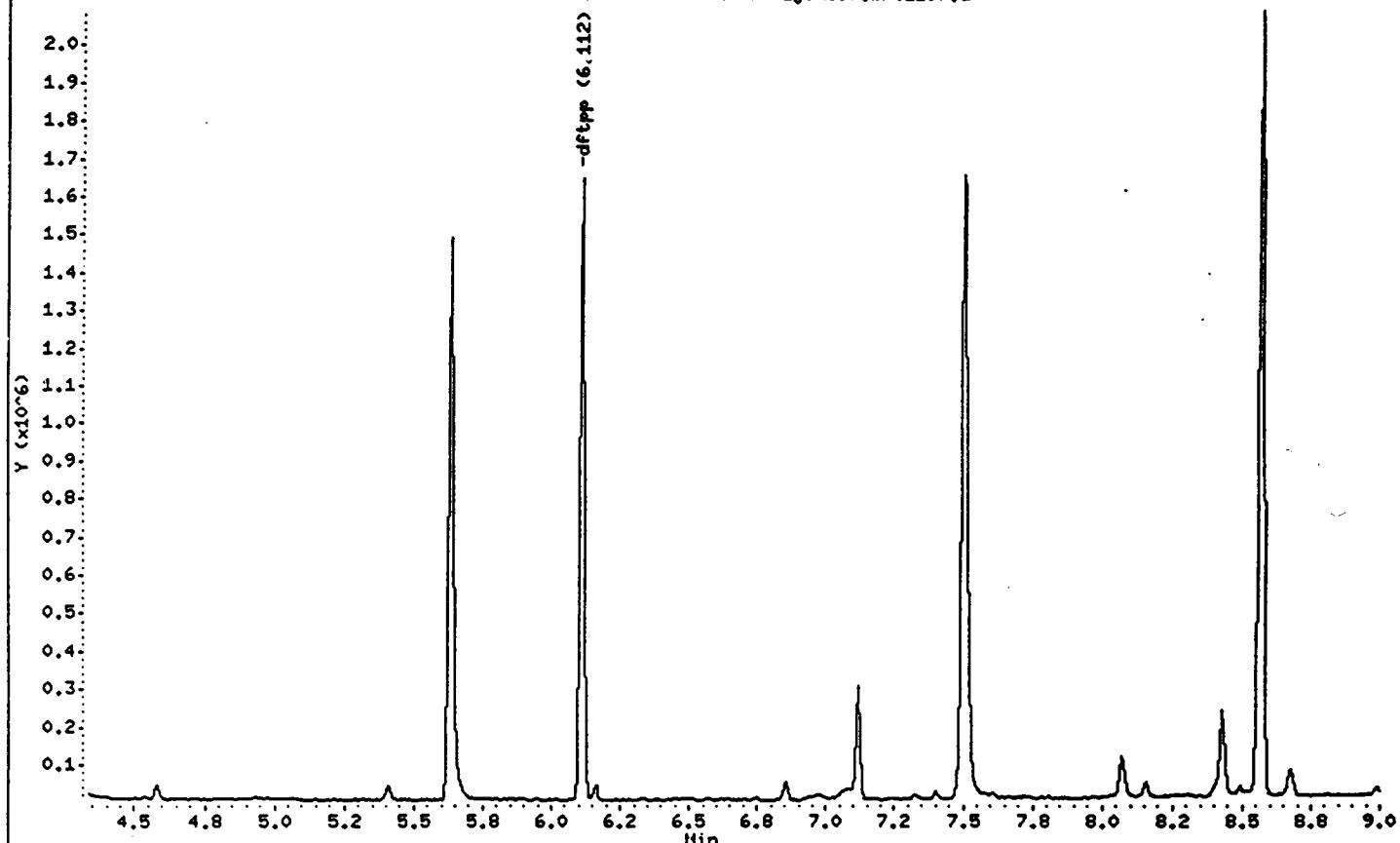
Sample Info: TDFT153

Column phase: DB-5

Operator: BNAHS 3

Column diameter: 0.25

/chem/BNAHS3.i/8270/06-02-97/02june97.b/t1197.d



SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab File ID: T1496

DFTPP Injection Date: 06/19/97

Instrument ID: BNAMS3

DFTPP Injection Time: 1929

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.2
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	61.4
70	Less than 2.0% of mass 69	0.3 (0.4)1
127	40.0 - 60.0% of mass 198	52.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	18.3
365	Greater than 1.0% of mass 198	1.99
441	0.0 - 100.0% of mass 443	12.5 (77.1)2
442	40.0 - 110.0% of mass 198	80.7
443	17.0 - 23.0% of mass 442	16.3 (20.2)3

1-Value is % mass 69

2-Value is % mass 443

3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT ID	LAB SAMPLE No.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	TSTD170A	TSTD170A	T1497	06/19/97	1951
02	SB167	SB167	T1498	06/19/97	2040
03	PX-1	96866	T1499	06/19/97	2129
04	PX-5	96870	T1500	06/19/97	2217
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					

Data File: /chem/BNAAMS3.i/8270/06-02-97/19jun97A.b/t1496.d

Date : 19-JUN-97 19:29:00

Client ID:

Instrument: BNAAMS3.i

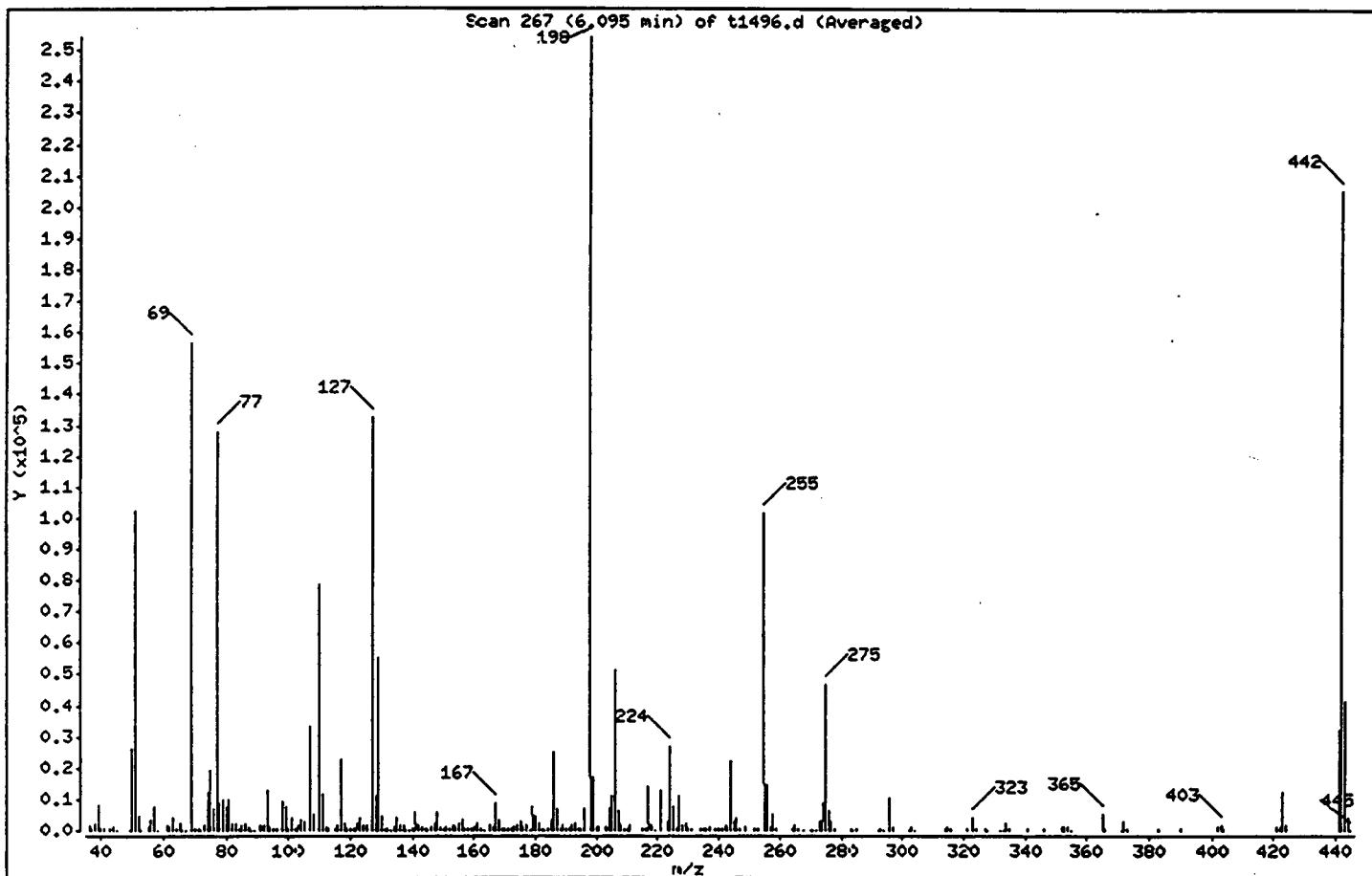
Sample Info: TDFT170A

Column phase: DB-5

1 dftpp

Operator: BNAAMS 3

Column diameter: 0.25



n/e	ION ABUNDANCE CRITERIA	X RELATIVE ABUNDANCE
198 Base Peak, 100% relative abundance	100.00	
51 30.00 - 60.00% of mass 198	40.18	
68 Less than 2.00% of mass 69	0.00 (< 0.00)	
69 Mass 69 relative abundance	61.41	
70 Less than 2.00% of mass 69	0.27 (< 0.44)	
127 40.00 - 60.00% of mass 198	52.07	
197 Less than 1.00% of mass 198	0.00	
199 5.00 - 9.00% of mass 198	6.58	
275 10.00 - 30.00% of mass 198	18.33	
365 Greater than 1.00% of mass 198	1.99	
441 0.01 - 100.00% of mass 443	12.54 (> 77.11)	
442 40.00 - 110.00% of mass 198	80.67	
443 17.00 - 23.00% of mass 442	16.27 (> 20.16)	

Data File: /chem/BNAHMS3.i/8270/06-02-97/19jun97A.b/t1496.d

Date : 19-JUN-97 19:29:00

Client ID:

Instrument: BNAHMS3.i

Sample Info: TDFT170A

Operator: BNAHMS 3

Column phase: DB-5

Column diameter: 0.25

Data File: t1496.d

Spectrum: Scan 268 (6.095 min) of t1496.d (Averaged)

Location of Maximum: 198.00

Number of points: 256

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1920 113.00	469 181.00	2530 264.00	475			
37.00	736 115.00	424 182.00	448 265.00	2015			
38.00	2053 116.00	1512 183.00	109 266.00	580			
39.00	8213 117.00	23024 184.00	596 268.00	143			
40.00	611 118.00	2144 185.00	3596 270.00	139			
41.00	628 119.00	296 186.00	25412 271.00	233			
43.00	385 120.00	426 187.00	7032 272.00	153			
44.00	1165 121.00	316 188.00	624 273.00	2836			
45.00	181 122.00	2615 189.00	1666 274.00	8846			
49.00	175 123.00	3918 190.00	345 275.00	46597			
50.00	26318 124.00	2008 191.00	836 276.00	6453			
51.00	102130 125.00	1732 192.00	2023 277.00	3134			
52.00	4811 127.00	132365 193.00	2402 278.00	501			
53.00	110 128.00	11056 194.00	516 283.00	425			
55.00	1250 129.00	55424 195.00	356 284.00	161			
56.00	3400 130.00	4832 196.00	7102 285.00	485			
57.00	7819 131.00	615 198.00	254186 292.00	101			
58.00	263 132.00	577 199.00	16732 293.00	781			
61.00	1516 133.00	200 200.00	1110 294.00	104			
62.00	1442 134.00	1318 201.00	1262 296.00	10260			
63.00	4140 135.00	4251 203.00	924 297.00	1317			
64.00	401 136.00	1621 204.00	7268 302.00	119			
65.00	2596 137.00	1570 205.00	11333 303.00	1231			
66.00	272 138.00	238 206.00	51162 304.00	214			
67.00	265 139.00	287 207.00	6604 314.00	554			
69.00	156413 140.00	797 208.00	1699 315.00	1248			
70.00	692 141.00	6132 209.00	574 316.00	688			
71.00	302 142.00	1687 210.00	302 321.00	431			
72.00	100 143.00	1350 211.00	1958 323.00	4353			
73.00	1500 144.00	299 215.00	621 324.00	797			
74.00	12005 145.00	188 216.00	469 327.00	627			
75.00	19561 146.00	1174 217.00	13976 328.00	209			
76.00	6916 147.00	2626 218.00	1949 332.00	120			
77.00	127888 148.00	6109 219.00	138 333.00	192			
78.00	6582 149.00	1071 221.00	12619 334.00	2525			

Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1496.d

Date : 19-JUN-97 19:29:00

Client ID:

Instrument: BNAMS3.i

Sample Info: TDFT170A

Operator: BNAMS 3

Column phase: DB-5

Column diameter: 0.25

Data File: t1496.d

Spectrum: Scan 268 (6.095 min) of t1496.d (Averaged)

Location of Maximum: 198.00

Number of points: 256

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	10144	150.00		366	223.00	3114	335.00
80.00	7348	151.00		925	224.00	26925	341.00
81.00	10078	152.00		603	225.00	7409	346.00
82.00	2417	153.00		1599	226.00	475	352.00
83.00	2212	154.00		1291	227.00	11027	353.00
84.00	499	155.00		2496	228.00	1847	354.00
85.00	1939	156.00		3664	229.00	2440	355.00
86.00	2453	157.00		468	230.00	383	365.00
87.00	1187	158.00		865	231.00	875	366.00
88.00	255	159.00		718	234.00	684	371.00
89.00	139	160.00		1358	235.00	742	372.00
91.00	1944	161.00		2270	236.00	380	373.00
92.00	2036	162.00		701	237.00	932	383.00
93.00	12055	163.00		278	239.00	325	390.00
94.00	984	165.00		1789	240.00	436	402.00
95.00	551	166.00		956	241.00	787	403.00
96.00	672	167.00		8496	242.00	1511	404.00
98.00	9395	168.00		3421	243.00	1364	421.00
99.00	7725	169.00		664	244.00	21945	422.00
100.00	653	170.00		340	245.00	3146	423.00
101.00	4177	171.00		460	246.00	4010	424.00
102.00	418	172.00		846	247.00	801	441.00
103.00	1890	173.00		934	249.00	895	442.00
104.00	3381	174.00		1784	252.00	553	443.00
105.00	2783	175.00		2866	253.00	730	444.00
107.00	33173	176.00		1213	255.00	101466	445.00
108.00	5059	177.00		1779	256.00	14353	
110.00	78733	178.00		261	257.00	1176	
111.00	11970	179.00		7409	258.00	5521	
112.00	1277	180.00		4853	259.00	848	

Data File: /chem/BNAHS3.i/8270/06-02-97/19jun97A.b/t1496.d

Date : 19-JUN-97 19:29:00

Client ID:

Instrument: BNAHS3.i

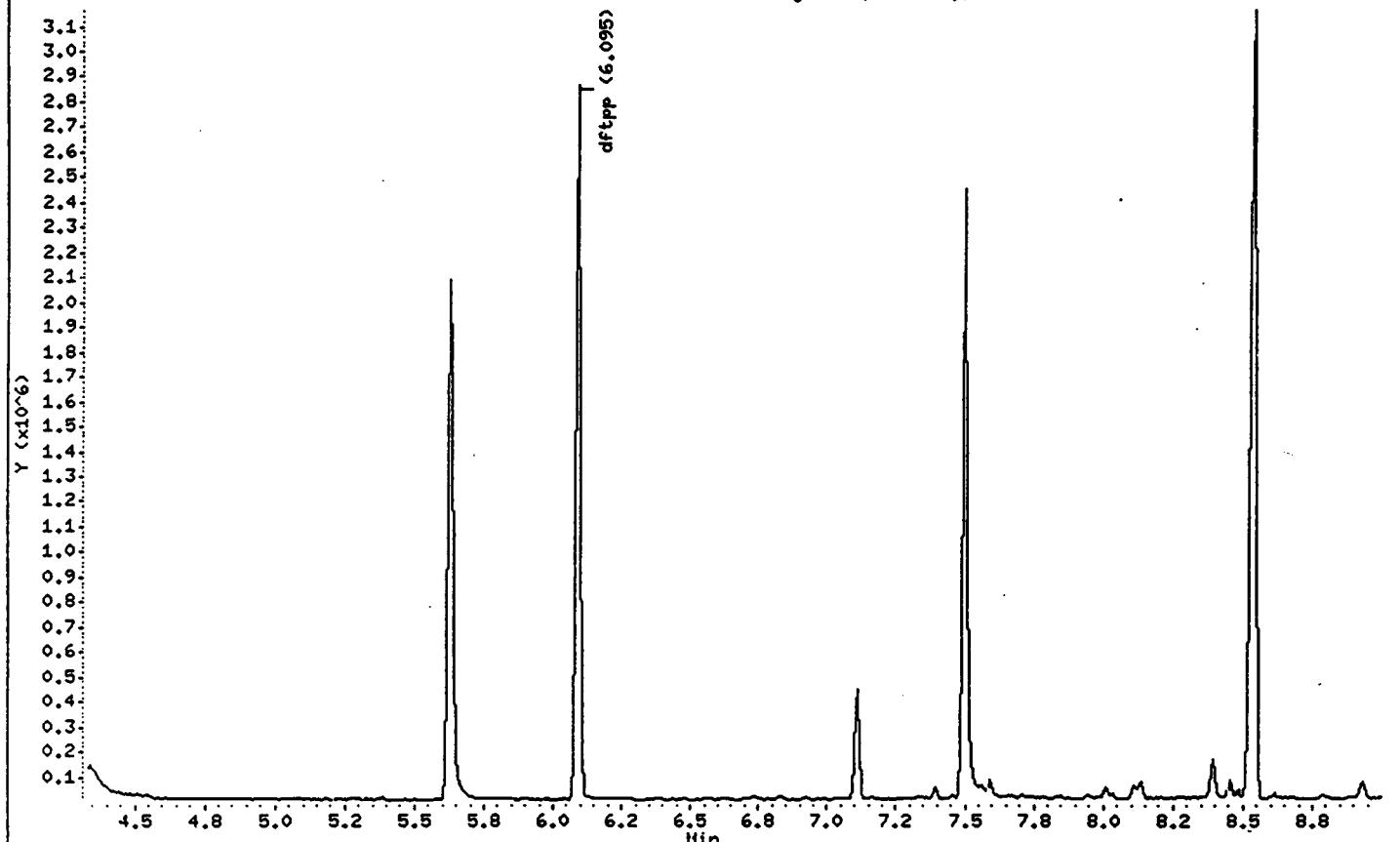
Sample Info: TDFT170A

Operator: BNAHS 3

Column phase: DB-5

Column diameter: 0.25

/chem/BNAHS3.i/8270/06-02-97/19jun97A.b/t1496.d



VOLATILE METHOD BLANK SUMMARY

LAB SAMPLE NO.

AV164

Matrix: SOIL

Date Analyzed: 06/13/97

Level: LOW

Time Analyzed: 1019

Lab File ID: A9458

Heated Purge (Y/N) Y

Instrument ID: VOAMS1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT ID.	LAB SAMPLE NO	LAB FILE ID	TIME ANALYZED
01	PX-3	96868	A9459	1119
02	PX-4	96869	A9460	1148
03	PX-5	96870	A9461	1218
04	PX-6	96871	A9462	1253
05	PX-7	96872	A9463	1322
06	PX-8	96873	A9464	1352
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

Client ID: AV164
Site:

Lab Sample No: AV164
Lab Job No: V393

Date Sampled: _____
Date Received: _____
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9458.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 0

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
Chloromethane	ND	1.0
Bromomethane	ND	1.0
Vinyl Chloride	ND	1.0
Chloroethane	ND	1.0
Methylene Chloride	6.6	1.0
Acetone	ND	5.0
Carbon Disulfide	ND	1.0
Trichlorofluoromethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
1,2-Dichloroethane	ND	1.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	1.0
Carbon Tetrachloride	ND	1.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
2-Chloroethyl Vinyl Ether	ND	1.0
Bromoform	ND	1.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	1.0
Chlorobenzene	ND	1.0
Ethylbenzene	ND	1.0

Client ID: AV164
Site:

Lab Sample No: AV164
Lab Job No: V393

Date Sampled: _____
Date Received: _____
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9458.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Styrene	ND	1.0
Xylene (Total)	ND	1.0
Ethyl Ether	ND	10
Acrolein	ND	50
Freon TF	ND	10
TBA	ND	100
Acrylonitrile	ND	50
MTBE	ND	1.0
DIPE	ND	1.0
Ethyl Acetate	ND	20
Vinyl Acetate	ND	1.0
Isopropyl Acetate	ND	5.0
Propyl Acetate	ND	5.0
Butyl Acetate	ND	5.0
1,2-Dibromoethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0
Naphthalene	ND	1.0
Methylnaphthalene (total)	ND	5.0
Dimethylnaphthalene (total)	ND	5.0
Dichlorodifluoromethane	ND	1.0
5-Methyl-2-Hexanone	ND	1.0
Isopropylbenzene	ND	1.0
1,2,4-Trimethylbenzene	ND	1.0
Cyclohexanone	ND	100
Methylmethacrylate	ND	10
Isoprene	ND	10
Allyl Alcohol	ND	1000
Epichlorohydrin	ND	200
Acetonitrile	ND	200
Cyclohexane	ND	10
Allyl Chloride	ND	10
Benzyl Chloride	ND	10

Client ID: AV164
Site:

Lab Sample No: AV164
Lab Job No: V393

Date Sampled: _____
Date Received: _____
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9458.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: .0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
1, 4-Dioxane	ND	1000

Client ID: AV164
Site:

Lab Sample No: AV164
Lab Job No: V393

Date Sampled: _____
Date Received: _____
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS1.i
Lab File ID: a9458.d

Matrix: SOIL
Level: LOW
Sample Weight: 5.0 g
Purge Volume: 5.0 ml
% Moisture: 0.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

0.0

Data File: /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9458.d
Report Date: 13-Jun-97 15:04:30

Envirotech Research Inc.

VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/a9458.d

Lab Smp Id: AV164

Inj Date : 13-JUN-97 10:19:00

Operator : VOAMS 5

Inst ID: VOAMS1.i

Smp Info : AV164

Misc Info :

Comment :

Method : /chem/VOAMS1.i/8240LOW/06-06-97/13jun97.b/IFF8240.m

Meth Date : 13-Jun-97 09:56:07 Quant Type: ISTD

Cal Date : 06-JUN-97 13:06:00 Cal File: a9409.d

Als bottle: 2

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: all.sub

Target Version: 3.20

Procesing Host: hp735

Concentration Formula: ((Vt/Ws) / ((100 - M)/100))

Name	Value	Description
Vt	5.000	Volume of final extract (mL)
Ws	5.000	Weight of sample extracted (g)
M	0.000	% Moisture (not decanted)

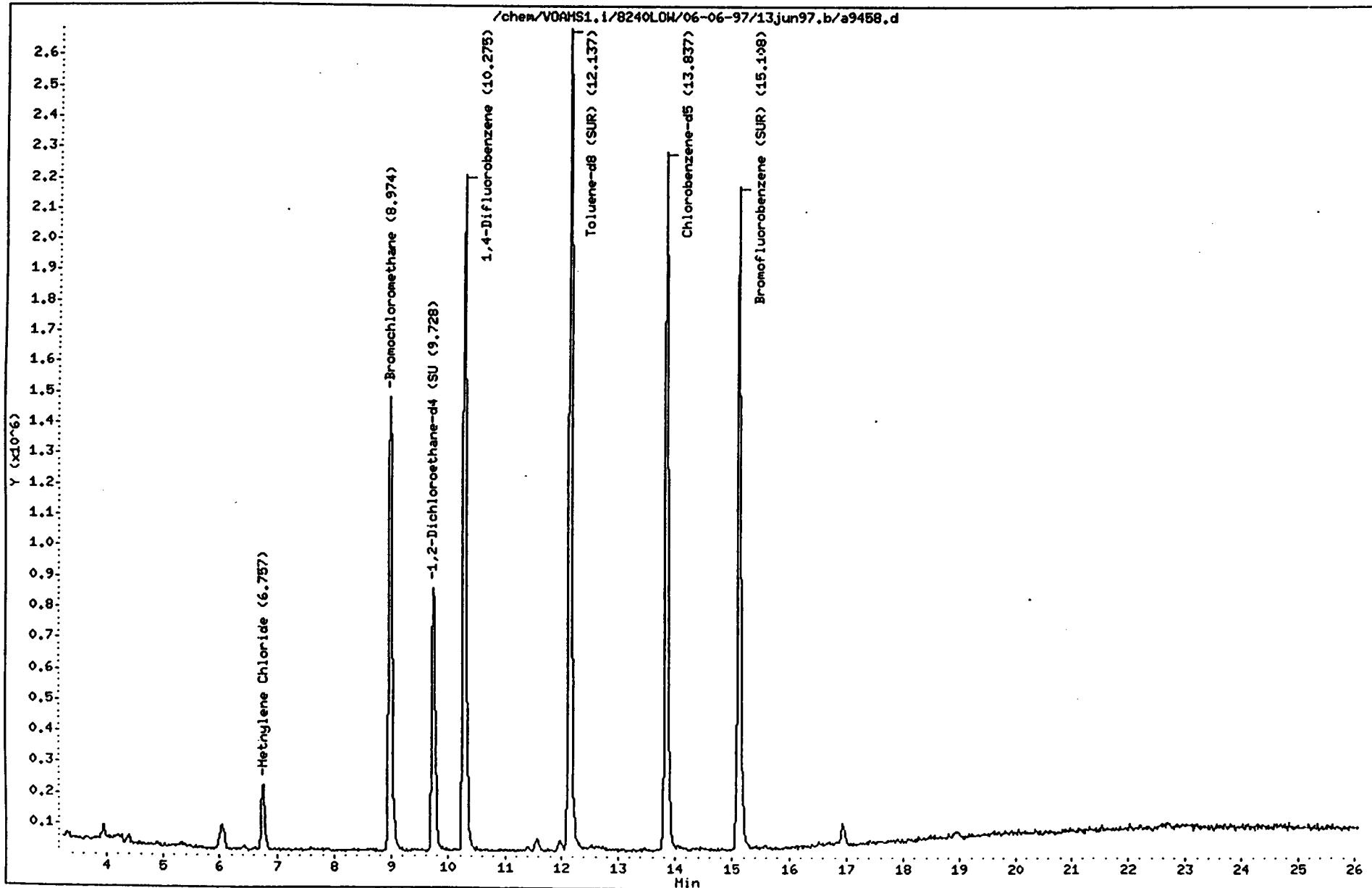
Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/L)
6 Methylene Chloride	84	6.757	6.706 (0.753)	189883	6.6	6.6	
* 2 Bromochloromethane	128	8.974	8.923 (1.000)	679790	50	50	
\$ 16 1,2-Dichloroethane-d4 (SUR)	65	9.728	9.677 (0.947)	1051508	47	47	
* 19 1,4-Difluorobenzene	114	10.275	10.224 (1.000)	3285398	50	50	
\$ 37 Toluene-d8 (SUR)	98	12.137	12.086 (1.181)	3484076	49	49	
* 32 Chlorobenzene-d5	117	13.837	13.756 (1.000)	2361548	50	50	
\$ 41 Bromofluorobenzene (SUR)	174	15.108	15.042 (1.092)	946685	46	46	

Data File: /chem/VOAMS1.i/8240LOH/06-06-97/13jun97.b/a9458.d
Date : 13-JUN-97 10:19:00
Client ID:
Sample Info: AV164

Column phase: DB624

Instrument: VOAMS1.i

Operator: VOAMS 5
Column diameter: 0.53



Data File: /chem/VOAMS1.i/824CLOH/06-C6-97/13jun97.b/a9458.d

Date : 13-JUN-97 10:19:00

Client ID:

Instrument: VOAMS1.i

Sample Info: AV164

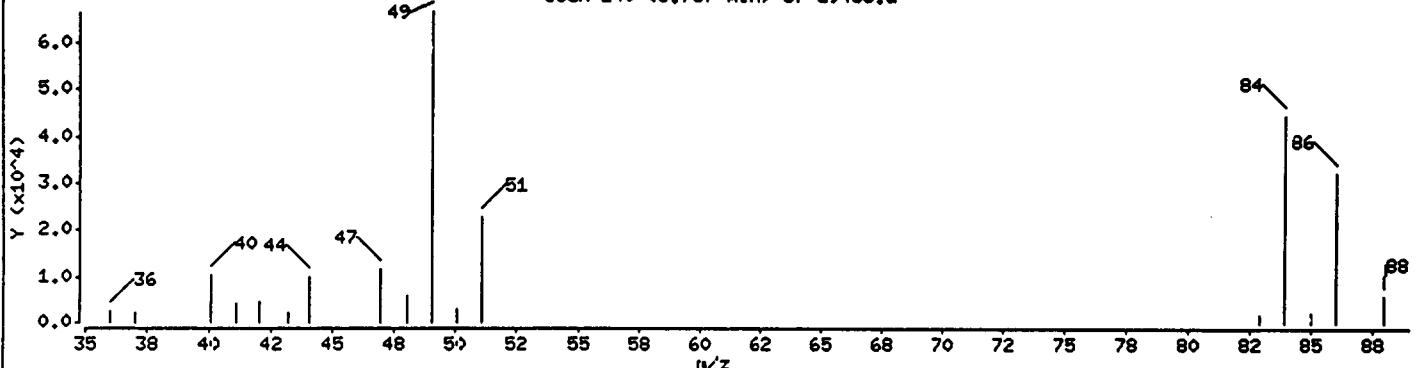
Operator: VOAMS 5

Column phase: DB624

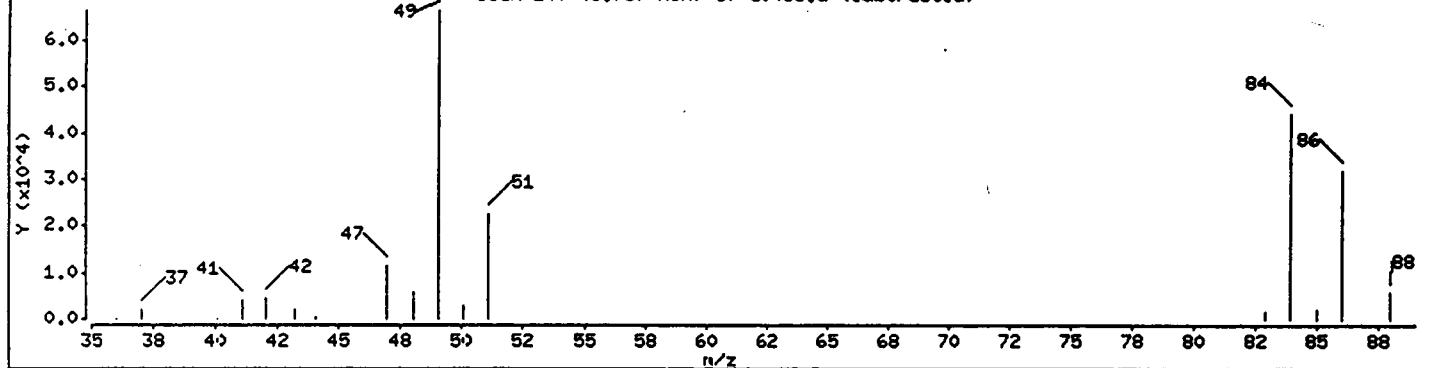
Column diameter: 0.53

6 Methylene Chloride

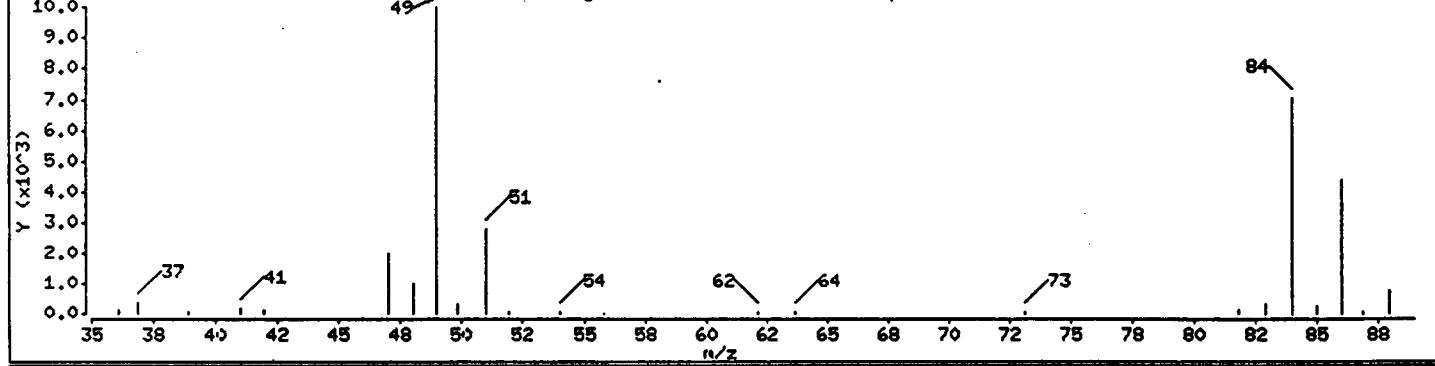
Scan 240 (6.757 min) of a9458.d



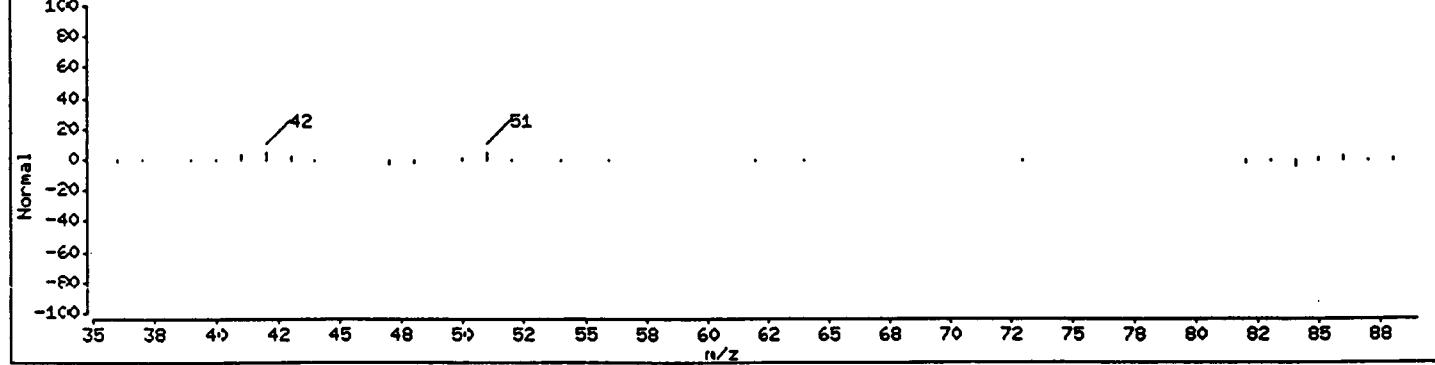
Scan 240 (6.757 min) of a9458.d (Subtracted)



6 Methylene Chloride (Reference Spectrum)



Scan 240 (6.757 min) of a9458.d (% DIFFERENCE)



VOLATILE METHOD BLANK SUMMARY

LAB SAMPLE NO.

CV164B

Matrix: SOIL

Date Analyzed: 06/13/97

Level: HIGH

Time Analyzed: 0947

Lab File ID: C3059

Heated Purge (Y/N) N

Instrument ID: VOAMS3

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

CLIENT ID.	LAB SAMPLE NO	LAB FILE ID	TIME ANALYZED
01 PX-1	96866	C3061	1156
02 PX-2	96867	C3062	1225
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

COMMENTS:

Client ID: CV164B
Site:

Lab Sample No: CV164B
Lab Job No: V393

Date Sampled: _____
Date Received: _____
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c3059.d

Matrix: SOIL
Level: HIGH
Sample Weight: 4.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0

VOLATILE ORGANICS - GC/MS
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation Limit</u> <u>Units: ug/kg</u>
Chloromethane	ND	120
Bromomethane	ND	120
Vinyl Chloride	ND	120
Chloroethane	ND	120
Methylene Chloride	130	120
Acetone	ND	620
Carbon Disulfide	ND	120
Trichlorofluoromethane	ND	120
1,1-Dichloroethene	ND	120
1,1-Dichloroethane	ND	120
trans-1,2-Dichloroethene	ND	120
cis-1,2-Dichloroethene	ND	120
Chloroform	ND	120
1,2-Dichloroethane	ND	120
2-Butanone	ND	620
1,1,1-Trichloroethane	ND	120
Carbon Tetrachloride	ND	120
Bromodichloromethane	ND	120
1,2-Dichloropropane	ND	120
cis-1,3-Dichloropropene	ND	120
Trichloroethene	ND	120
Dibromochloromethane	ND	120
1,1,2-Trichloroethane	ND	120
Benzene	ND	120
trans-1,3-Dichloropropene	ND	120
2-Chloroethyl Vinyl Ether	ND	120
Bromoform	ND	120
4-Methyl-2-Pentanone	ND	620
2-Hexanone	ND	620
Tetrachloroethene	ND	120
1,1,2,2-Tetrachloroethane	ND	120
Toluene	ND	120
Chlorobenzene	ND	120
Ethylbenzene	ND	120

Client ID: CV164B
Site:

Lab Sample No: CV164B
Lab Job No: V393

Date Sampled: _____
Date Received: _____
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c3059.d

Matrix: SOIL
Level: HIGH
Sample Weight: 4.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
Styrene	ND	120
Xylene (Total)	ND	120
Ethyl Ether	ND	120
Acrolein	ND	6200
Freon TF	ND	120
Isopropanol	ND	62000
Acetonitrile	ND	12000
TBA	ND	12000
Acrylonitrile	ND	6200
MTBE	ND	120
Hexane	ND	120
DIPE	ND	120
Ethyl Acetate	ND	620
Vinyl Acetate	ND	120
Tetrahydrofuran	ND	120
Cyclohexane	ND	120
Isobutanol	ND	62000
Isopropyl Acetate	ND	620
n-Heptane	ND	120
n-Butanol	ND	62000
Propyl Acetate	ND	620
Butyl Acetate	ND	620
1,2-Dibromoethane	ND	120
1,3-Dichlorobenzene	ND	120
1,4-Dichlorobenzene	ND	120
1,2-Dichlorobenzene	ND	120
Naphthalene	ND	120
Methylnaphthalene (total)	ND	620
Dimethylnaphthalene (total)	ND	620
Dichlorodifluoromethane	ND	120
1,4-Dioxane	ND	62000
Ethyl Acrylate	ND	620
2-Nitropropane	ND	120000
Cyclohexanone	ND	12000

Client ID: CV164B
Site:

Lab Sample No: CV164B
Lab Job No: V393

Date Sampled: _____
Date Received: _____
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c3059.d

Matrix: SOIL
Level: HIGH
Sample Weight: 4.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8240B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Methyl Methacrylate	ND	620
Butyl Methacrylate	ND	620
Butyl Acrylate	ND	620

Client ID: CV164B
Site:

Lab Sample No: CV164B
Lab Job No: V393

Date Sampled: _____
Date Received: _____
Date Analyzed: 06/13/97
GC Column: DB624
Instrument ID: VOAMS3.i
Lab File ID: c3059.d

Matrix: SOIL
Level: HIGH
Sample Weight: 4.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8240B

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

0.0

Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3059.d
Report Date: 13-Jun-97 10:21:20

Envirotech Research Inc.

VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3059.d
Lab Smp Id: CV164B Client Smp ID: CV164B
Inj Date : 13-JUN-97 09:47:00
Operator : VOAMS 3 Inst ID: VOAMS3.i
Smp Info : CV164B
Misc Info : Meoh Comp. Blank
Comment :
Method : /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/8240b-HIGH.m
Meth Date : 13-Jun-97 09:08:33 Quant Type: ISTD
Cal Date : 24-MAY-97 13:16:00 Cal File: c2694.d
Als bottle: 10 QC Sample: BLANK
Dil Factor: 50.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.20
Procesing Host: hp735

Concentration Formula: (Vt/Ws)/((100-M)/100)

Name	Value	Description
Vt	10.000	Volume of final extract (mL)
Ws	4.000	Weight of sample extracted (g)
M	0.000	% Moisture (not decanted)

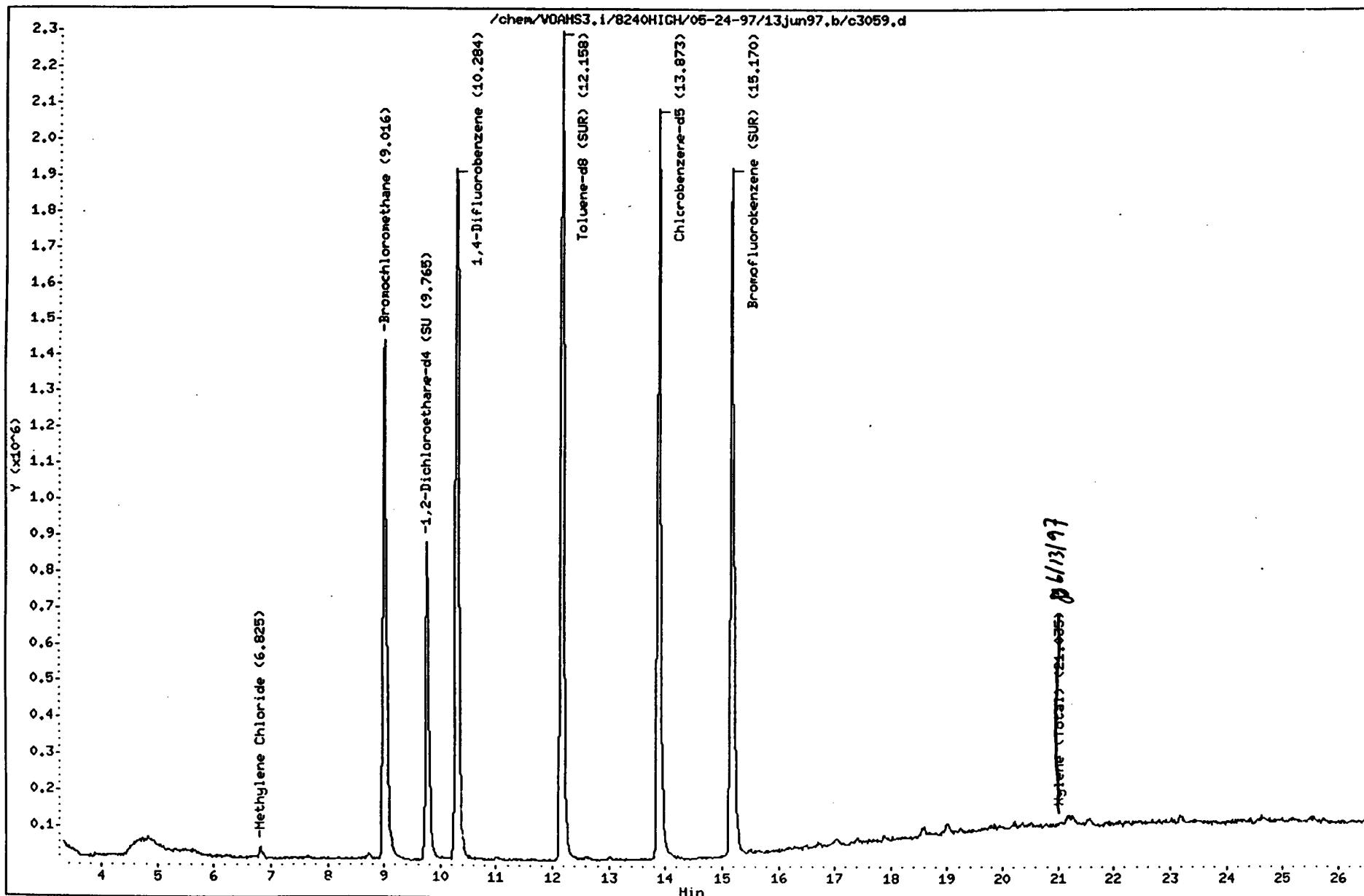
Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/L) FINAL (ug/Kg)
6 Methylene Chloride	84	6.840	6.726 (0.759)		23566	1.0	130
2 Bromochloromethane	128	9.016	8.917 (1.000)		778516	50	
16 1,2-Dichloroethane-d4 (SUR)	65	9.765	9.666 (0.948)		1096640	48	6000
19 1,4-Difluorobenzene	114	10.298	10.200 (1.000)		3185999	50	
37 Toluene-d8 (SUR)	98	12.158	12.059 (1.181)		3222303	52	6400
32 Chlorobenzene-d5	117	13.873	13.788 (1.000)		2371723	50	
41 Bromofluorobenzene (SUR)	174	15.170	15.085 (1.093)		1107870	45	5600

Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3059.d
Date : 13-JUN-97 09:47:00
Client ID: CV164B
Sample Info: CV164B

Column phase: DB624

Instrument: VOAMS3.i

Operator: VOAMS 3
Column diameter: 0.63



Data File: /chem/VOAMS3.i/8240HIGH/05-24-97/13jun97.b/c3059.d

Date : 13-JUN-97 09:47:00

Client ID: CV164B

Instrument: VOAMS3.i

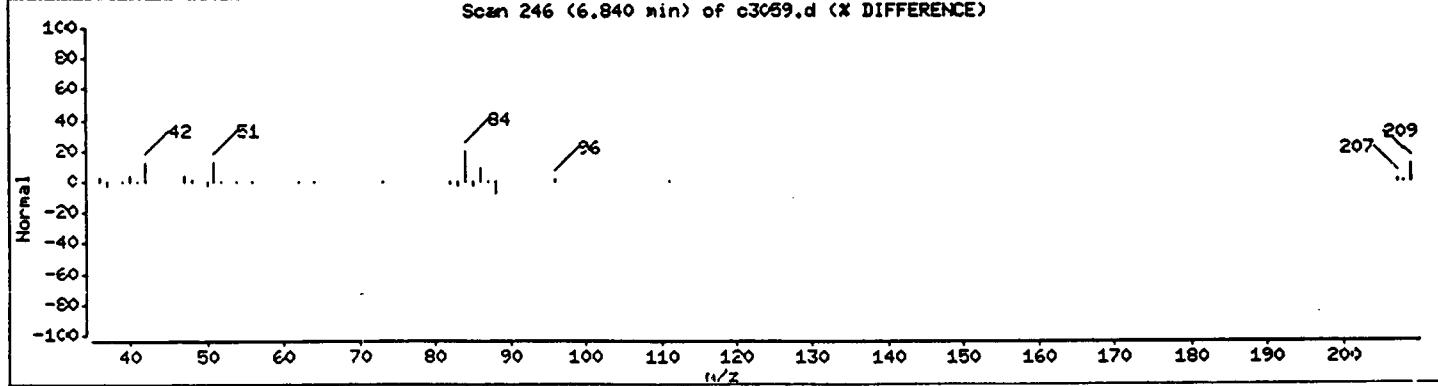
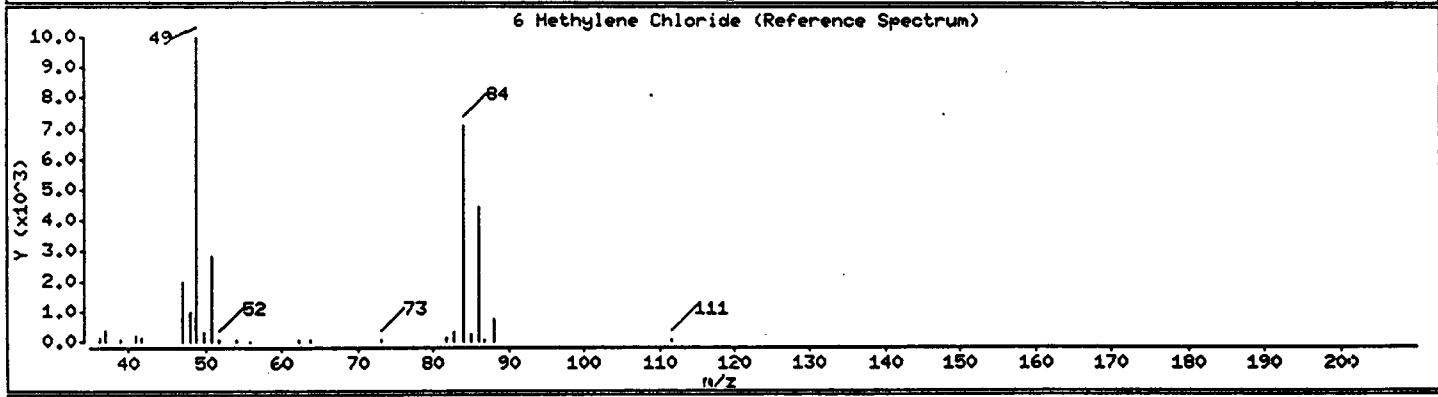
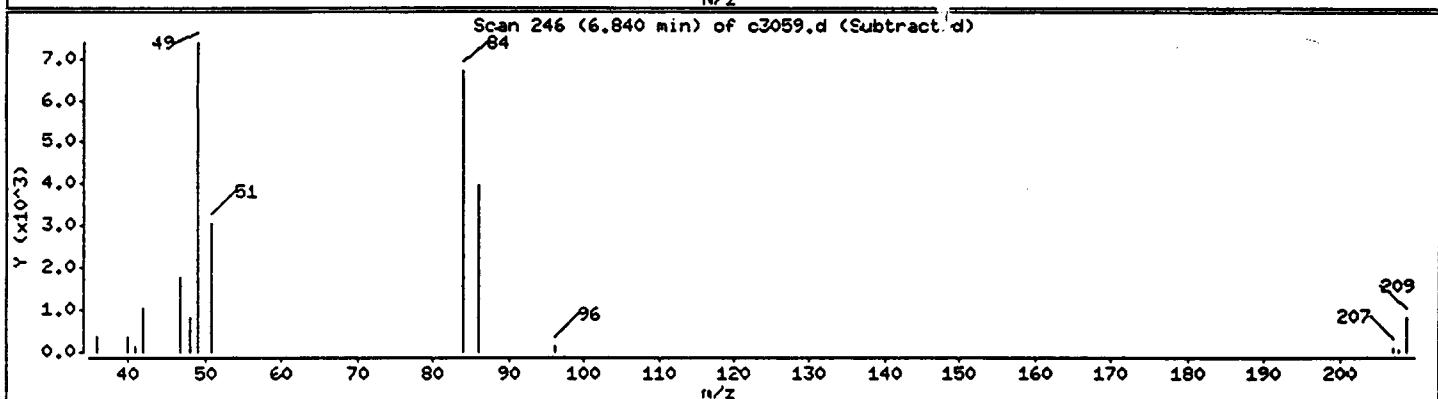
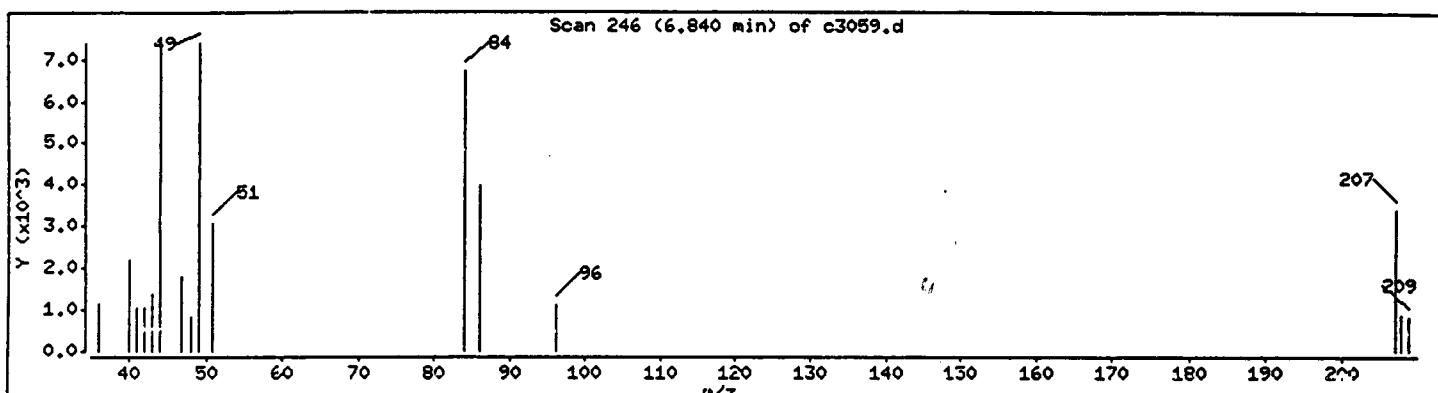
Sample Info: CV164B

Operator: VOAMS 3

Column phase: DB624

Column diameter: 0.53

6 Methylene Chloride



LAB SAMPLE NO.

SEMOVOLATILE METHOD BLANK SUMMARY

SB167

Matrix: SOIL

Date Analyzed: 06/19/97

Level: LOW

Time Analyzed: 2040

Instrument ID: BNAMS3

Lab File ID: T1498

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

CLIENT ID.	LAB SAMPLE NO	LAB FILE ID	DATE ANALYZED
01	PX-1	96866	06/19/97
02	PX-5	96870	06/19/97
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

COMMENTS:

Client ID: SB167
Site:

Lab Sample No: SB167
Lab Job No: V393

Date Sampled: _____
Date Received: _____
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1498.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0
% Moisture: 0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270B

<u>Parameter</u>	<u>Analytical Results</u> <u>Units: ug/kg</u> <u>(Dry Weight)</u>	<u>Quantitation</u> <u>Limit</u> <u>Units: ug/kg</u>
Phenol	ND	330
2-Chlorophenol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	330
2,4-Dimethylphenol	ND	330
2,4-Dichlorophenol	ND	330
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2,4-Dinitrophenol	ND	660
4-Nitrophenol	ND	660
4,6-Dinitro-2-methylphenol	ND	660
Pentachlorophenol	ND	660
Benzoic Acid	ND	660
N-Nitrosodimethylamine	ND	330
bis(2-Chloroethyl)ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
bis(2-chloroisopropyl)ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
bis(2-Chloroethoxy)methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	16
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	330

Client ID: SB167
Site:

Lab Sample No: SB167
Lab Job No: V393

Date Sampled: _____
Date Received: _____
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1498.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0
% Moisture: 0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Dimethylphthalate	ND	330
Acenaphthylene	ND	16
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	330
Acenaphthene	ND	16
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	16
4-Nitroaniline	ND	330
N-Nitrosodiphenylamine	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	16
Anthracene	ND	16
Carbazole	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	16
Pyrene	ND	16
Benzidine	ND	660
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a)anthracene	ND	16
Chrysene	ND	16
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	16
Benzo(k)fluoranthene	ND	16
Benzo(a)pyrene	ND	16
Indeno(1,2,3-cd)pyrene	ND	16
Dibenz(a,h)anthracene	ND	16
Benzo(g,h,i)perylene	ND	16
Pyridine	ND	330

Client ID: SB167
Site:

Lab Sample No: SB167
Lab Job No: V393

Date Sampled: _____
Date Received: _____
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1498.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0
% Moisture: 0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270B

<u>Parameter</u>	<u>Analytical Results</u> Units: ug/kg (Dry Weight)	<u>Quantitation</u> Limit <u>Units: ug/kg</u>
Aniline	ND	660
Benzyl Alcohol	ND	330
1,2-Diphenylhydrazine	ND	330
Diphenyl	ND	330
Diphenyl Ether	ND	330

Client ID: SB167
Site:

Lab Sample No: SB167
Lab Job No: V393

Date Sampled: _____
Date Received: _____
Date Extracted: 06/16/97
Date Analyzed: 06/19/97
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t1498.d

Matrix: SOIL
Level: LOW
Sample Weight: 30.0 g
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0
% Moisture: 0.0

**SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270B**

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Unknown Aldol Condensate	9.63	28000	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION

28000

Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1498.d
Report Date: 21-Jun-97 09:36:35

Envirotech Research Inc.

SEMI-VOLATILE ORGANIC COMPOUND ANALYSIS

Data file : /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1498.d
Lab Smp Id: SB167 Client Smp ID: SB167
Inj Date : 19-JUN-97 20:40:00
Operator : BNAMS3 Inst ID: BNAMS3.i
Smp Info : SB167;30;2;1;
Misc Info : SB167;BNA;3456,3444;;
Comment :
Method : /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/8270b.m
Meth Date : 21-Jun-97 08:13:23 jeri Quant Type: ISTD
Cal Date : 02-JUN-97 16:23:00 Cal File: t1203.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.20
Procesing Host: hp735

Concentration Formula: Uf*1000*Vt/(Ws*(100-M)/100)

Name	Value	Description
Uf	1.000	ng unit correction factor
Vt	2.000	Volume of final extract (ml)
Ws	30.000	Weight of sample extracted (g)
M	0.000	% Moisture

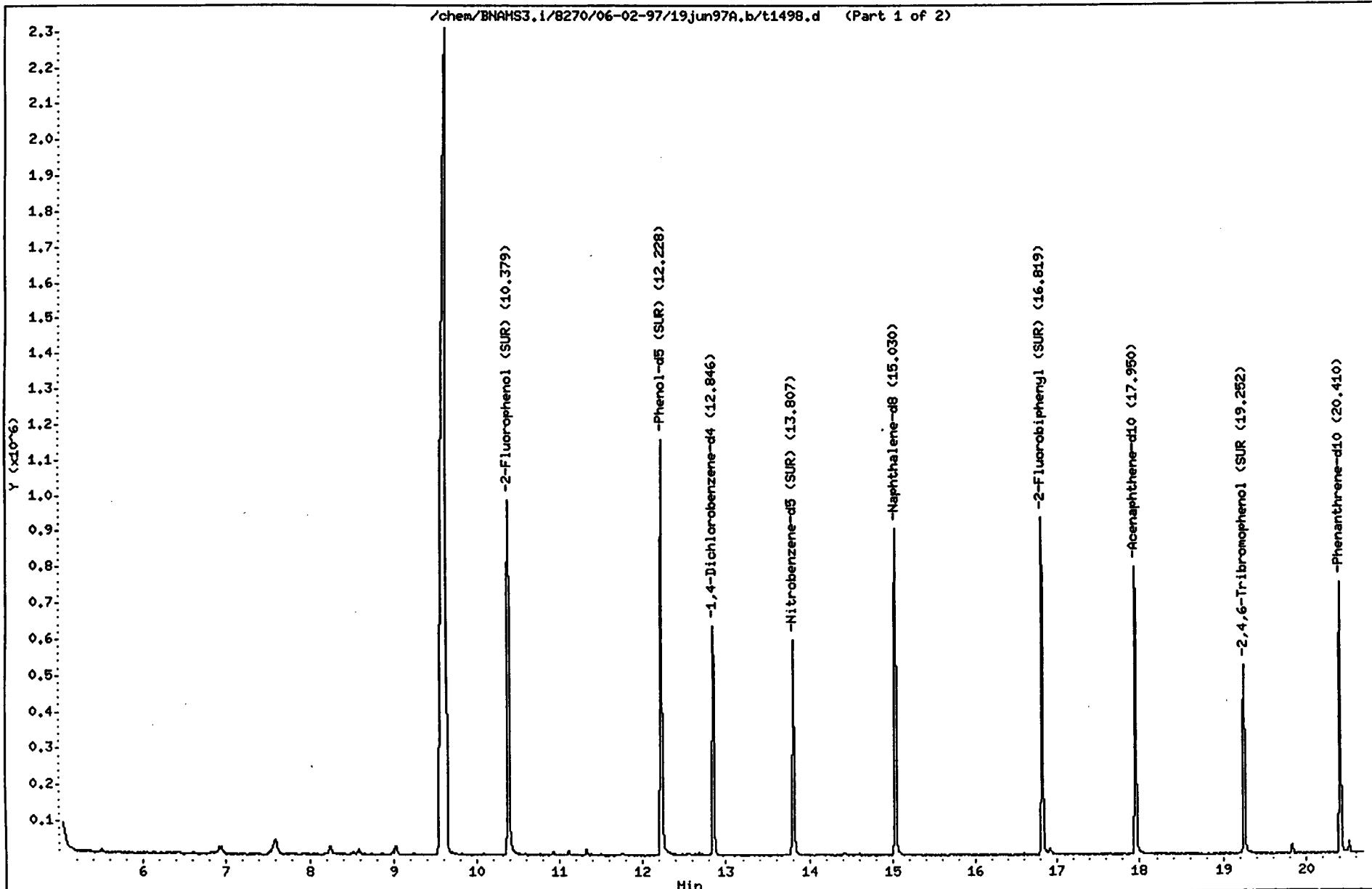
Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/ml)
\$ 16 2-Fluorophenol (SUR)	112	10.386	10.370 (0.808)	479300	80	5400	
\$ 17 Phenol-d5 (SUR)	99	12.228	12.225 (0.952)	629578	90	6000	
* 79 1,4-Dichlorobenzene-d4	152	12.846	12.845 (1.000)	118218	40		
\$ 76 Nitrobenzene-d5 (SUR)	82	13.807	13.815 (0.919)	292849	45	3000	
* 80 Naphthalene-d8	136	15.030	15.036 (1.000)	539697	40		
\$ 77 2-Fluorobiphenyl (SUR)	172	16.819	16.824 (0.937)	348589	44	2900	
* 82 Acenaphthene-d10	164	17.950	17.954 (1.000)	232336	40		
\$ 18 2,4,6-Tribromophenol (SUR)	330	19.259	19.258 (1.073)	76276	69	4600	
* 83 Phenanthrene-d10	188	20.410	20.414 (1.000)	353028	40		
\$ 78 Terphenyl-d14 (SUR)	244	23.027	23.026 (0.929)	352220	47	3100	
* 81 Chrysene-d12	240	24.784	24.796 (1.000)	307106	40		
* 84 Perylene-d12	264	28.103	28.110 (1.000)	285019	40		

Data File: /chem/BNAMS3.i/8270/06-02-97/19jun97A.b/t1498.d
Date : 19-JUN-97 20:40:00
Client ID: SB167
Sample Info: SB167;30;2;1;

Column phase: DB-5

Instrument: BNAMS3.i

Operator: BNAMS3
Column diameter: 0.25



Data File: /chem/BNAMS3.i/8270/06-02-97/19Jun97A.b/t1498.d
Date : 19-JUN-97 20:40:00
Client ID: SB167
Sample Info: SB167;30;2;1;

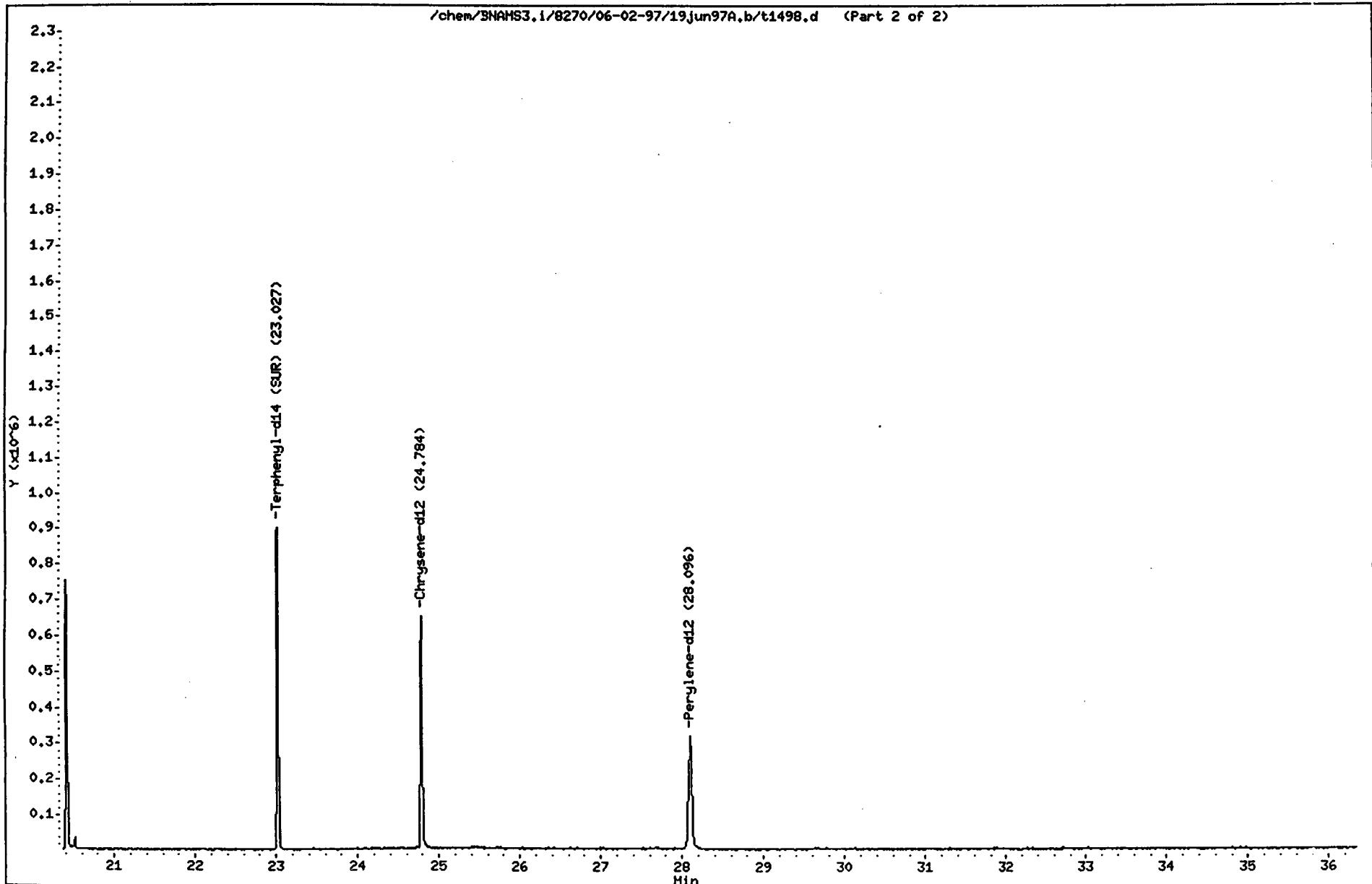
Instrument: BNAMS3.i

Column phase: DB-5

Operator: BNAMS3
Column diameter: 0.25

228

/chem/BNAMS3.i/8270/06-02-97/19Jun97A.b/t1498.d (Part 2 of 2)



VOLATILE ORGANICS INITIAL CALIBRATION DATA
METHOD 8240B

Instrument ID: VOAMS1

Calibration Date(s) : 06/06/97 06/06/97

Heated Purge: (Y/N) Y

Calibration Time(s) : 1054 1306

LAB FILE ID:	RRF10: A9409 RRF100: A9407	RRF20: A9408 RRF200: A9406	RRF50: A9405		
COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200
Chloromethane	1.658	1.678	1.528	1.490	1.354
Bromomethane	0.788	0.864	0.839	0.752	0.761
Vinyl Chloride	1.699	1.768	1.672	1.672	1.560
Chloroethane	0.570	0.672	0.554	0.487	0.492
Methylene Chloride	2.353	2.249	2.068	1.973	1.878
Acetone	0.621	0.485	0.395	0.354	0.298
Carbon Disulfide	5.008	5.574	5.504	5.424	5.322
Trichlorofluoromethane	2.852	3.148	3.044	2.864	2.726
1,1-Dichloroethene	1.684	1.794	1.755	1.653	1.618
1,1-Dichloroethane	3.638	4.106	3.851	3.780	3.582
trans-1,2-Dichloroethene	2.038	2.088	2.075	2.022	1.987
cis-1,2-Dichloroethene	2.007	2.118	2.065	2.032	1.962
Chloroform	3.345	3.764	3.563	3.434	3.298
1,2-Dichloroethane	0.394	0.417	0.387	0.398	0.368
2-Butanone	0.132	0.156	0.162	0.160	0.141
1,1,1-Trichloroethane	0.519	0.586	0.567	0.567	0.548
Carbon Tetrachloride	0.443	0.495	0.487	0.493	0.483
Bromodichloromethane	0.620	0.649	0.682	0.699	0.694
1,2-Dichloropropane	0.512	0.550	0.520	0.532	0.508
cis-1,3-Dichloropropene	0.579	0.658	0.653	0.666	0.640
Trichloroethene	0.477	0.523	0.495	0.499	0.481
Dibromochloromethane	0.545	0.571	0.623	0.643	0.639
1,1,2-Trichloroethane	0.312	0.334	0.323	0.327	0.307
Benzene	1.180	1.274	1.212	1.229	1.190
trans-1,3-Dichloropropene	0.428	0.487	0.482	0.495	0.478
2-Chloroethyl Vinyl Ether	0.210	0.223	0.231	0.242	0.226
Bromoform	0.269	0.321	0.353	0.374	0.365
4-Methyl-2-Pentanone	0.413	0.392	0.378	0.402	0.366
2-Hexanone	0.285	0.308	0.336	0.366	0.323
Tetrachloroethene	0.483	0.544	0.529	0.525	0.513
1,1,2,2-Tetrachloroethane	0.675	0.740	0.765	0.792	0.743
Toluene	1.286	1.317	1.264	1.264	1.220
Chlorobenzene	1.065	1.160	1.133	1.112	1.085
Ethylbenzene	0.525	0.562	0.543	0.542	0.526
Styrene	0.967	1.092	1.085	1.117	1.096
Xylene (Total)	0.628	0.694	0.671	0.670	0.652
Ethyl Ether	1.351	1.437	1.407	1.406	1.281
Acrolein	0.129	0.136	0.151	0.154	0.143
Freon TF	3.693	4.093	4.127	3.909	3.787

VOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 8240B

Instrument ID: VOAMS1

Calibration Date(s): 06/06/97 06/06/97

Heated Purge: (Y/N) Y

Calibration Time(s): 1054 1306

LAB FILE ID:	RRF10: A9409 RRF100: A9407	RRF20: A9408 RRF200: A9406	RRF50: A9405		
COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200
TBA	0.123	0.129	0.130	0.136	0.119
Acrylonitrile	0.322	0.349	0.376	0.386	0.365
MTBE	3.720	4.072	3.854	3.846	3.567
DIPE					
Ethyl Acetate	1.926	2.025	2.084	2.230	1.981
Vinyl Acetate	2.680	3.049	2.897	3.020	2.757
Isopropyl Acetate					
Propyl Acetate					
Butyl Acetate					
1,2-Dibromoethane	0.581	0.643	0.643	0.659	0.621
1,3-Dichlorobenzene	0.677	0.817	0.772	0.825	0.799
1,4-Dichlorobenzene	0.940	1.002	1.019	0.976	0.949
1,2-Dichlorobenzene	0.690	0.790	0.752	0.754	0.720
Naphthalene	0.894	1.002	0.980	1.056	0.961
Methylnaphthalene (total)					
Dimethylnaphthalene (total)					
Dichlorodifluoromethane	2.409	2.496	2.438	2.330	2.187
5-Methyl-2-Hexanone					
Isopropylbenzene					
1,2,4-Trimethylbenzene					
Cyclohexanone					
Methylmethacrylate	0.059	0.065	0.073	0.075	0.072
Isoprene	2.263	2.602	2.540	2.476	2.374
Allyl Alcohol	0.011	0.012	0.014	0.016	0.014
Epichlorohydrin	0.030	0.032	0.043	0.038	0.035
Acetonitrile	0.242	0.257	0.316	0.261	0.243
Cyclohexane	3.270	3.778	3.576	3.545	3.375
Allyl Chloride	1.001	1.167	1.182	1.094	1.065
Benzyl Chloride	0.684	0.764	0.855	0.919	0.864
1,4-Dioxane	0.003	0.002	0.003	0.003	0.003
1,2-Dichloroethane-d4 (SUR)	0.323	0.360	0.332	0.353	0.332
Toluene-d8 (SUR)	1.037	1.112	1.058	1.105	1.105
Bromofluorobenzene (SUR)	0.393	0.438	0.430	0.448	0.453

VOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 8240B

Instrument ID: VOAMS1

Calibration Date(s): 06/06/97 06/06/97

Heated Purge: (Y/N) Y

Calibration Time(s): 1054 1306

COMPOUND	CURVE	COEFFICIENTS			%RSD OR R^2
		A0	A1	A2	
Chloromethane	AVRG	1.54173489			8.6**
Bromomethane	AVRG	0.80089476			6.1*
Vinyl Chloride	AVRG	1.67428024			4.5*
Chloroethane	AVRG	0.55524980			13.5*
Methylene Chloride	AVRG	2.10437506			9.3*
Acetone	2ORDR	0.00000000	1.99611628	1.13836141	0.999* ^{29.7}
Carbon Disulfide	AVRG	5.36623679			4.1*
Trichlorofluoromethane	AVRG	2.92671619			5.7*
1,1-Dichloroethene	AVRG	1.70374697			4.2*
1,1-Dichloroethane	AVRG	3.79130793			5.4**
trans-1,2-Dichloroethene	AVRG	2.04187360			2.0*
cis-1,2-Dichloroethene	AVRG	2.03696424			2.9*
Chloroform	AVRG	3.48034000			5.4*
1,2-Dichloroethane	AVRG	0.39301930			4.5*
2-Butanone	AVRG	0.15027370			8.8*
1,1,1-Trichloroethane	AVRG	0.55742968			4.6*
Carbon Tetrachloride	AVRG	0.48008206			4.4*
Bromodichloromethane	AVRG	0.66868569			5.0*
1,2-Dichloropropane	AVRG	0.52424072			3.2*
cis-1,3-Dichloropropene	AVRG	0.63941835			5.5*
Trichloroethene	AVRG	0.49511559			3.7*
Dibromochloromethane	AVRG	0.60442292			7.2*
1,1,2-Trichloroethane	AVRG	0.32052252			3.4*
Benzene	AVRG	1.21715940			3.0*
trans-1,3-Dichloropropene	AVRG	0.47394148			5.6*
2-Chloroethyl Vinyl Ether	AVRG	0.22647954			5.1*
Bromoform	AVRG	0.33634557			12.7**
4-Methyl-2-Pentanone	AVRG	0.39023995			4.8*
2-Hexanone	AVRG	0.32362827			9.4*
Tetrachloroethene	AVRG	0.51860847			4.4*
1,1,2,2-Tetrachloroethane	AVRG	0.74307554			5.8**
Toluene	AVRG	1.27028515			2.8*
Chlorobenzene	AVRG	1.11096915			3.4**
Ethylbenzene	AVRG	0.53982860			2.8*
Styrene	AVRG	1.07141338			5.6*
Xylene (Total)	AVRG	0.66298786			3.7*
Ethyl Ether	AVRG	1.37647950			4.5*
Acrolein	AVRG	0.14236675			7.2*
Freon TF	AVRG	3.92175600			4.8*

* Compound with required maximum % RSD value.

** Compound with required minimum RRF value.

VOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 8240B

Instrument ID: VOAMS1

Calibration Date(s): 06/06/97 06/06/97

Heated Purge: (Y/N) Y

Calibration Time(s): 1054 1306

COMPOUND	CURVE	A0	A1	A2	%RSD OR R^2
TBA	AVRG		0.12733245		5.2*
Acrylonitrile	AVRG		0.35978283		7.0*
MTBE	AVRG		3.81200364		4.9*
DIPE	AVRG				
Ethyl Acetate	AVRG		2.04933038		5.7*
Vinyl Acetate	AVRG		2.88068631		5.6*
Isopropyl Acetate	AVRG				
Propyl Acetate	AVRG				
Butyl Acetate	AVRG				
1, 2-Dibromoethane	AVRG		0.62927708		4.8*
1, 3-Dichlorobenzene	AVRG		0.77789891		7.7*
1, 4-Dichlorobenzene	AVRG		0.97721696		3.4*
1, 2-Dichlorobenzene	AVRG		0.74118252		5.1*
Naphthalene	AVRG		0.97857726		6.1*
Methylnaphthalene (total)	AVRG				
Dimethylnaphthalene (total)	AVRG				
Dichlorodifluoromethane	AVRG		2.37216999		5.0*
5-Methyl-2-Hexanone	AVRG				
Isopropylbenzene	AVRG				
1, 2, 4-Trimethylbenzene	AVRG				
Cyclohexanone	AVRG				
Methylmethacrylate	AVRG		0.06906589		10.0*
Isoprene	AVRG		2.45118231		5.5**
Allyl Alcohol	AVRG		0.01349388		13.8*
Epichlorohydrin	AVRG		0.03567092		14.4**
Acetonitrile	AVRG		0.26408066		11.5**
Cyclohexane	AVRG		3.50853266		5.6**
Allyl Chloride	AVRG		1.10189907		6.8**
Benzyl Chloride	AVRG		0.81732118		11.4**
1, 4-Dioxane	AVRG		0.00282089		7.6*
1, 2-Dichloroethane-d4 (SUR)	AVRG		0.34023836		4.6*
Toluene-d8 (SUR)	AVRG		1.08343712		3.1*
Bromofluorobenzene (SUR)	AVRG		0.43219440		5.5*

* Compound with required maximum % RSD value.

** Compound with required minimum RRF value.

VOLATILE ORGANICS CONTINUING CALIBRATION CHECK
METHOD 8240B

Instrument ID: VOAMS1

Calibration Date: 06/13/97 Time: 0928

Lab File ID: A9457

Init. Calib. Date(s): 06/06/97 06/06/97

Heated Purge: (Y/N) Y

Init. Calib. Times: 1054 1306

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	1.542		0.3	100.0	50.0
Bromomethane	0.801			100.0	50.0
Vinyl Chloride	1.674			100.0	20.0
Chloroethane	0.555			100.0	50.0
Methylene Chloride	2.104			100.0	50.0
Acetone	0.431			100.0	50.0
Carbon Disulfide	5.366			100.0	50.0
Trichlorofluoromethane	2.927			100.0	50.0
1,1-Dichloroethene	1.701			100.0	20.0
1,1-Dichloroethane	3.791		0.3	100.0	50.0
trans-1,2-Dichloroethene	2.042			100.0	50.0
cis-1,2-Dichloroethene	2.037			100.0	50.0
Chloroform	3.481			100.0	20.0
1,2-Dichloroethane	0.393			100.0	50.0
2-Butanone	0.150			100.0	50.0
1,1,1-Trichloroethane	0.557			100.0	50.0
Carbon Tetrachloride	0.480			100.0	50.0
Bromodichloromethane	0.669			100.0	50.0
1,2-Dichloropropane	0.524			100.0	20.0
cis-1,3-Dichloropropene	0.639			100.0	50.0
Trichloroethene	0.495			100.0	50.0
Dibromochloromethane	0.604			100.0	50.0
1,1,2-Trichloroethane	0.321			100.0	50.0
Benzene	1.217			100.0	50.0
trans-1,3-Dichloropropene	0.474			100.0	50.0
2-Chloroethyl Vinyl Ether	0.226			100.0	50.0
Bromoform	0.336		0.1	100.0	50.0
4-Methyl-2-Pentanone	0.390			100.0	50.0
2-Hexanone	0.324			100.0	50.0
Tetrachloroethene	0.519			100.0	50.0
1,1,2,2-Tetrachloroethane	0.743		0.3	100.0	50.0
Toluene	1.270			100.0	20.0
Chlorobenzene	1.111		0.3	100.0	50.0
Ethylbenzene	0.540			100.0	20.0
Styrene	1.071			100.0	50.0
Xylene (Total)	0.663			100.0	50.0
Ethyl Ether	1.376			100.0	50.0

VOLATILE ORGANICS CONTINUING CALIBRATION CHECK (cont'd)
METHOD 8240B

Instrument ID: VOAMS1

Calibration Date: 06/13/97 Time: 0928

Lab File ID: A9457

Init. Calib. Date(s): 06/06/97 06/06/97

Heated Purge: (Y/N) Y

Init. Calib. Times: 1054 1306

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Acrolein	0.143			100.0	50.0
Freon TF	3.922			100.0	50.0
TBA	0.127			100.0	50.0
Acrylonitrile	0.360			100.0	50.0
MTBE	3.812			100.0	50.0
DIPE					50.0
Ethyl Acetate	2.049			100.0	50.0
Vinyl Acetate	2.881			100.0	50.0
Isopropyl Acetate					50.0
Propyl Acetate					50.0
Butyl Acetate					50.0
1,2-Dibromoethane	0.629			100.0	50.0
1,3-Dichlorobenzene	0.778			100.0	50.0
1,4-Dichlorobenzene	0.977			100.0	50.0
1,2-Dichlorobenzene	0.741			100.0	50.0
Naphthalene	0.979			100.0	50.0
Methylnaphthalene (total)					50.0
Dimethylnaphthalene (total)					50.0
Dichlorodifluoromethane	2.372			100.0	50.0
5-Methyl-2-Hexanone			0.01		50.0
Isopropylbenzene			0.01		50.0
1,2,4-Trimethylbenzene			0.01		50.0
Cyclohexanone			0.01		50.0
Methylmethacrylate	0.069			100.0	50.0
Isoprene	2.451		0.01	100.0	50.0
Allyl Alcohol	0.013			100.0	50.0
Epichlorohydrin	0.036		0.01	100.0	50.0
Acetonitrile	0.264		0.01	100.0	50.0
Cyclohexane	3.509		0.01	100.0	50.0
Allyl Chloride	1.102		0.01	100.0	50.0
Benzyl Chloride	0.817		0.01	100.0	50.0
1,4-Dioxane	0.003			100.0	50.0
1,2-Dichloroethane-d4 (SUR)	0.340			100.0	50.0
Toluene-d8 (SUR)	1.083			100.0	50.0
Bromofluorobenzene (SUR)	0.432			100.0	50.0

VOLATILE ORGANICS INITIAL CALIBRATION DATA
METHOD 8240B

Instrument ID: VOAMS3

Calibration Date(s): 05/24/97 05/24/97

Heated Purge: (Y/N) N

Calibration Time(s): 1121 1316

LAB FILE ID:	RRF10: C2694 RRF100: C2691	RRF20: C2693 RRF200: C2690	RRF50: C2692		
COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200
Chloromethane	1.445	1.460	1.357	1.279	1.065
Bromomethane	0.575	0.504	0.459	0.450	0.363
Vinyl Chloride	1.216	1.200	1.145	1.108	0.964
Chloroethane	0.318	0.276	0.274	0.265	0.223
Methylene Chloride	1.655	1.587	1.478	1.418	1.264
Acetone	0.362	0.345	0.336	0.308	0.298
Carbon Disulfide	3.607	3.992	4.187	4.099	3.982
Trichlorofluoromethane	2.125	2.209	2.215	2.073	1.892
1,1-Dichloroethene	1.329	1.254	1.256	1.225	1.102
1,1-Dichloroethane	2.890	3.063	3.035	2.872	2.736
trans-1,2-Dichloroethene	1.550	1.553	1.527	1.470	1.350
cis-1,2-Dichloroethene	1.589	1.598	1.591	1.528	1.388
Chloroform	2.656	2.804	2.804	2.628	2.558
1,2-Dichloroethane	0.401	0.437	0.434	0.408	0.392
2-Butanone	0.121	0.126	0.127	0.124	0.116
1,1,1-Trichloroethane	0.472	0.519	0.534	0.509	0.497
Carbon Tetrachloride	0.403	0.448	0.468	0.458	0.453
Bromodichloromethane	0.592	0.639	0.654	0.653	0.619
1,2-Dichloropropane	0.473	0.518	0.517	0.485	0.462
cis-1,3-Dichloropropene	0.541	0.607	0.618	0.594	0.604
Trichloroethene	0.426	0.467	0.469	0.440	0.424
Dibromochloromethane	0.624	0.685	0.706	0.714	0.704
1,1,2-Trichloroethane	0.315	0.343	0.336	0.320	0.318
Benzene	0.950	1.062	1.064	0.986	0.953
trans-1,3-Dichloropropene	0.426	0.483	0.502	0.489	0.489
2-Chloroethyl Vinyl Ether	0.233	0.255	0.249	0.246	0.247
Bromoform	0.356	0.420	0.467	0.474	0.503
4-Methyl-2-Pentanone	0.370	0.404	0.415	0.381	0.401
2-Hexanone	0.288	0.295	0.303	0.289	0.310
Tetrachloroethene	0.567	0.627	0.645	0.607	0.613
1,1,2,2-Tetrachloroethane	0.653	0.712	0.734	0.711	0.727
Toluene	1.039	1.113	1.115	1.067	1.044
Chlorobenzene	0.962	1.028	1.061	1.008	0.989
Ethylbenzene	0.447	0.499	0.494	0.464	0.469
Styrene	0.846	0.938	0.983	0.956	0.958
Xylene (Total)	0.550	0.586	0.605	0.577	0.563
Ethyl Ether					
Acrolein					
Freon TF					

VOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 8240B

Instrument ID: VOAMS3

Calibration Date(s): 05/24/97 05/24/97

Heated Purge: (Y/N) N

Calibration Time(s): 1121 1316

LAB FILE ID:	RRF10: C2694 RRF100: C2691	RRF20: C2693 RRF200: C2690	RRF50: C2692		
COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200
Isopropanol					
Acetonitrile					
TBA	0.091	0.084	0.082	0.079	0.089
Acrylonitrile					
MTBE	3.077	3.247	3.249	3.002	2.885
Hexane					
DIPE					
Ethyl Acetate	2.218	2.107	2.210	2.025	1.906
Vinyl Acetate	3.041	3.350	3.448	3.237	3.224
Tetrahydrofuran					
Cyclohexane					
Isobutanol					
Isopropyl Acetate	0.941	0.948	0.996	0.905	0.826
n-Heptane					
n-Butanol					
Propyl Acetate	0.103	0.107	0.105	0.105	0.106
Butyl Acetate	1.081	1.118	1.180	1.085	1.034
1,2-Dibromoethane	0.643	0.721	0.750	0.708	0.723
1,3-Dichlorobenzene	0.633	0.761	0.734	0.796	0.756
1,4-Dichlorobenzene	0.993	0.984	1.091	1.009	1.066
1,2-Dichlorobenzene	0.687	0.752	0.765	0.754	0.767
Naphthalene	1.117	1.086	1.105	1.075	1.063
Methylnaphthalene (total)					
Dimethylnaphthalene (total)					
Dichlorodifluoromethane	2.025	1.928	1.872	1.801	1.540
1,4-Dioxane	0.003	0.003	0.003	0.003	0.002
Ethyl Acrylate					
2-Nitropropane					
Cyclohexanone					
Methyl Methacrylate					
Butyl Methacrylate					
Butyl Acrylate					
-----	-----	-----	-----	-----	-----
1,2-Dichloroethane-d4 (SUR)	0.354	0.396	0.363	0.346	0.336
Toluene-d8 (SUR)	0.964	1.057	0.981	0.963	0.933
Bromofluorobenzene (SUR)	0.492	0.536	0.512	0.519	0.527

VOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 8240B

Instrument ID: VOAMS3

Calibration Date(s): 05/24/97 05/24/97

Heated Purge: (Y/N) N

Calibration Time(s): 1121

1316

COMPOUND	CURVE	COEFFICIENTS			%RSD OR R^2
		A0	A1	A2	
Chloromethane	AVRG	1.32120783			12.2**
Bromomethane	20RDR	0.00000000	1.65765798	0.74115257	0.998*/b.5
Vinyl Chloride	AVRG		1.12656834		9.0*
Chloroethane	AVRG		0.27110294		12.5*
Methylene Chloride	AVRG		1.48026150		10.3*
Acetone	AVRG		0.32984948		8.0*
Carbon Disulfide	AVRG		3.97357527		5.6*
Trichlorofluoromethane	AVRG		2.10282016		6.3*
1,1-Dichloroethene	AVRG		1.23325061		6.7*
1,1-Dichloroethane	AVRG		2.91915971		4.6**
trans-1,2-Dichloroethene	AVRG		1.48979369		5.7*
cis-1,2-Dichloroethene	AVRG		1.53917302		5.8*
Chloroform	AVRG		2.68999012		4.1*
1,2-Dichloroethane	AVRG		0.41430838		4.9*
2-Butanone	AVRG		0.12298251		3.5*
1,1,1-Trichloroethane	AVRG		0.50624528		4.7*
Carbon Tetrachloride	AVRG		0.44607121		5.6*
Bromodichloromethane	AVRG		0.63152794		4.1*
1,2-Dichloropropane	AVRG		0.49102806		5.2*
cis-1,3-Dichloropropene	AVRG		0.59284623		5.1*
Trichloroethene	AVRG		0.44501621		4.9*
Dibromochloromethane	AVRG		0.68676157		5.4*
1,1,2-Trichloroethane	AVRG		0.32648858		3.8*
Benzene	AVRG		1.00302084		5.6*
trans-1,3-Dichloropropene	AVRG		0.47779073		6.2*
2-Chloroethyl Vinyl Ether	AVRG		0.24592564		3.3*
Bromoform	AVRG		0.44402283		13.0**
4-Methyl-2-Pentanone	AVRG		0.39432406		4.6*
2-Hexanone	AVRG		0.29718097		3.2*
Tetrachloroethene	AVRG		0.61196446		4.7*
1,1,2,2-Tetrachloroethane	AVRG		0.70742908		4.5**
Toluene	AVRG		1.07558105		3.4*
Chlorobenzene	AVRG		1.00974221		3.7**
Ethylbenzene	AVRG		0.47482031		4.5*
Styrene	AVRG		0.93624574		5.6*
Xylene (Total)	AVRG		0.57613155		3.7*
Ethyl Ether	AVRG				
Acrolein	AVRG				
Freon TF	AVRG				

* Compound with required maximum % RSD value.

** Compound with required minimum RRF value.

VOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 8240B

Instrument ID: VOAMS3

Calibration Date(s): 05/24/97 05/24/97

Heated Purge: (Y/N) N

Calibration Time(s): 1121 1316

COMPOUND	CURVE	A0	COEFFICIENTS A1	A2	%RSD OR R^2
Isopropanol	AVRG				
Acetonitrile	AVRG				
TBA	AVRG		0.08500230		5.7*
Acrylonitrile	AVRG				
MTBE	AVRG		3.09201432		5.1*
Hexane	AVRG				
DIPE	AVRG				
Ethyl Acetate	AVRG		2.09304747		6.3*
Vinyl Acetate	AVRG		3.26017118		4.7*
Tetrahydrofuran	AVRG				
Cyclohexane	AVRG				
Isobutanol	AVRG				
Isopropyl Acetate	AVRG		0.92312611		6.9*
n-Heptane	AVRG				
n-Butanol	AVRG				
Propyl Acetate	AVRG		0.10512141		1.4*
Butyl Acetate	AVRG		1.09969081		4.9*
1,2-Dibromoethane	AVRG		0.70903841		5.6*
1,3-Dichlorobenzene	AVRG		0.73606903		8.4*
1,4-Dichlorobenzene	AVRG		1.02878189		4.6*
1,2-Dichlorobenzene	AVRG		0.74511579		4.4*
Naphthalene	AVRG		1.08926514		2.0*
Methylnaphthalene (total)	AVRG				
Dimethylnaphthalene (total)	AVRG				
Dichlorodifluoromethane	AVRG		1.83336652		10.0*
1,4-Dioxane	AVRG		0.00283760		8.9*
Ethyl Acrylate	AVRG				
2-Nitropropane	AVRG				
Cyclohexanone	AVRG				
Methyl Methacrylate	AVRG				
Butyl Methacrylate	AVRG				
Butyl Acrylate	AVRG				
1,2-Dichloroethane-d4 (SUR)	AVRG		0.35915277		6.4*
Toluene-d8 (SUR)	AVRG		0.97966188		4.8*
Bromofluorobenzene (SUR)	AVRG		0.51702258		3.2*

* Compound with required maximum % RSD value.

** Compound with required minimum RRF value.

VOLATILE ORGANICS CONTINUING CALIBRATION CHECK
METHOD 8240B

Instrument ID: VOAMS3

Calibration Date: 06/13/97 Time: 0844

Lab File ID: C3057

Init. Calib. Date(s): 05/24/97 05/24/97

Heated Purge: (Y/N) N

Init. Calib. Times: 1121 1316

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
Chloromethane	66	50	AVRG	-32.0	50.0
Bromomethane	27	50	2ORDR	46.0	50.0
Vinyl Chloride	55	50	AVRG	-10.0	20.0
Chloroethane	64	50	AVRG	-28.0	50.0
Methylene Chloride	57	50	AVRG	-14.0	50.0
Acetone	55	50	AVRG	-10.0	50.0
Carbon Disulfide	58	50	AVRG	-16.0	50.0
Trichlorofluoromethane	58	50	AVRG	-16.0	50.0
1,1-Dichloroethene	57	50	AVRG	-14.0	20.0
1,1-Dichloroethane	56	50	AVRG	-12.0	50.0
trans-1,2-Dichloroethene	58	50	AVRG	-16.0	50.0
cis-1,2-Dichloroethene	57	50	AVRG	-14.0	50.0
Chloroform	57	50	AVRG	-14.0	20.0
1,2-Dichloroethane	54	50	AVRG	-8.0	50.0
2-Butanone	54	50	AVRG	-8.0	50.0
1,1,1-Trichloroethane	55	50	AVRG	-10.0	50.0
Carbon Tetrachloride	53	50	AVRG	-6.0	50.0
Bromodichloromethane	53	50	AVRG	-6.0	50.0
1,2-Dichloropropane	55	50	AVRG	-10.0	20.0
cis-1,3-Dichloropropene	55	50	AVRG	-10.0	50.0
Trichloroethene	54	50	AVRG	-8.0	50.0
Dibromochloromethane	51	50	AVRG	-2.0	50.0
1,1,2-Trichloroethane	54	50	AVRG	-8.0	50.0
Benzene	56	50	AVRG	-12.0	50.0
trans-1,3-Dichloropropene	54	50	AVRG	-8.0	50.0
2-Chloroethyl Vinyl Ether	56	50	AVRG	-12.0	50.0
Bromoform	49	50	AVRG	2.0	50.0
4-Methyl-2-Pentanone	50	50	AVRG	0.0	50.0
2-Hexanone	52	50	AVRG	-4.0	50.0
Tetrachloroethene	51	50	AVRG	-2.0	50.0
1,1,2,2-Tetrachloroethane	53	50	AVRG	-6.0	50.0
Toluene	55	50	AVRG	-10.0	20.0
Chlorobenzene	54	50	AVRG	-8.0	50.0
Ethylbenzene	55	50	AVRG	-10.0	20.0
Styrene	54	50	AVRG	-8.0	50.0
Xylene (Total)	160	150	AVRG	-6.5	50.0
Ethyl Ether	0.0	50	AVRG	100.0	50.0

VOLATILE ORGANICS CONTINUING CALIBRATION CHECK (cont'd)
METHOD 8240B

Instrument ID: VOAMS3

Calibration Date: 06/13/97 Time: 0844

Lab File ID: C3057

Init. Calib. Date(s): 05/24/97 05/24/97

Heated Purge: (Y/N) N

Init. Calib. Times: 1121 1316

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
Acrolein	0.0	200	AVRG	100.0	50.0
Freon TF	0.0	50	AVRG	100.0	50.0
Isopropanol	0.0	3000	AVRG	100.0	50.0
Acetonitrile	0.0	500	AVRG	100.0	50.0
TBA	1900	2000	AVRG	5.0	50.0
Acrylonitrile	0.0	200	AVRG	100.0	50.0
MTBE	56	50	AVRG	-12.0	50.0
Hexane	0.0	50	AVRG	100.0	50.0
DIPE	0.0	50	AVRG	100.0	50.0
Ethyl Acetate	99	100	AVRG	1.0	50.0
Vinyl Acetate	50	50	AVRG	0.0	50.0
Tetrahydrofuran	0.0	50	AVRG	100.0	50.0
Cyclohexane	0.0	50	AVRG	100.0	50.0
Isobutanol	0.0	3000	AVRG	100.0	50.0
Isopropyl Acetate	94	100	AVRG	6.0	50.0
n-Heptane	0.0	50	AVRG	100.0	50.0
n-Butanol	0.0	3000	AVRG	100.0	50.0
Propyl Acetate	110	100	AVRG	-10.0	50.0
Butyl Acetate	94	100	AVRG	6.0	50.0
1,2-Dibromoethane	52	50	AVRG	-4.0	50.0
1,3-Dichlorobenzene	57	50	AVRG	-14.0	50.0
1,4-Dichlorobenzene	52	50	AVRG	-4.0	50.0
1,2-Dichlorobenzene	54	50	AVRG	-8.0	50.0
Naphthalene	48	50	AVRG	4.0	50.0
Methylnaphthalene (total)	0.0	50	AVRG	100.0	50.0
Dimethylnaphthalene (total)	0.0	50	AVRG	100.0	50.0
Dichlorodifluoromethane	50	50	AVRG	0.0	50.0
1,4-Dioxane	3000	3000	AVRG	0.0	50.0
Ethyl Acrylate	0.0	50	AVRG	100.0	50.0
2-Nitropropane	0.0	5000	AVRG	100.0	50.0
Cyclohexanone	0.0	50	AVRG	100.0	50.0
Methyl Methacrylate	0.0	50	AVRG	100.0	50.0
Butyl Methacrylate	0.0	50	AVRG	100.0	50.0
Butyl Acrylate	0.0	50	AVRG	100.0	50.0
1,2-Dichloroethane-d4 (SUR)	49	50	AVRG	2.0	50.0
Toluene-d8 (SUR)	51	50	AVRG	-2.0	50.0

VOLATILE ORGANICS CONTINUING CALIBRATION CHECK (cont'd)
METHOD 8240B

Instrument ID: VOAMS3 Calibration Date: 06/13/97 Time: 0844
Lab File ID: C3057 Init. Calib. Date(s): 05/24/97 05/24/97
Heated Purge: (Y/N) N Init. Calib. Times: 1121 1316

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
Bromofluorobenzene (SUR) _____	49	50	AVRG	2.0	50.0

SEMICVOLATILE ORGANICS INITIAL CALIBRATION DATA
METHOD 8270B

Instrument ID: BNAMS3

Calibration Date(s): 06/02/97 06/02/97

Calibration Time(s): 1233 1623

LAB FILE ID:	RRF10: T1203 RRF80: T1201	RRF20: T1202 RRF120: T1200	RRF50: T1198		
COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF120
Phenol	2.546	2.419	2.365	2.439	2.478
2-Chlorophenol	1.882	1.733	1.700	1.720	1.752
2-Methylphenol	1.674	1.694	1.663	1.696	1.708
4-Methylphenol	1.794	1.687	1.798	1.847	1.860
2-Nitrophenol	0.205	0.198	0.203	0.215	0.215
2,4-Dimethylphenol	0.380	0.368	0.375	0.387	0.378
2,4-Dichlorophenol	0.230	0.234	0.240	0.260	0.261
4-Chloro-3-methylphenol	0.342	0.325	0.332	0.344	0.327
2,4,6-Trichlorophenol	0.358	0.392	0.393	0.401	0.403
2,4,5-Trichlorophenol	0.333	0.417	0.415	0.416	0.425
2,4-Dinitrophenol	0.059	0.100	0.119	0.140	0.148
4-Nitrophenol	0.307	0.316	0.333	0.348	0.328
4,6-Dinitro-2-methylphenol	0.083	0.114	0.126	0.137	0.138
Pentachlorophenol	0.133	0.142	0.144	0.151	0.150
Benzoic Acid	0.122	0.168	0.198	0.235	0.182
N-Nitrosodimethylamine	1.382	1.414	1.535	1.545	1.563
bis(2-Chloroethyl)ether	1.963	1.890	1.842	1.882	1.897
1,3-Dichlorobenzene	1.624	1.632	1.664	1.631	1.676
1,4-Dichlorobenzene	1.681	1.646	1.689	1.682	1.686
1,2-Dichlorobenzene	1.547	1.522	1.556	1.521	1.561
bis(2-chloroisopropyl)ether	3.320	3.106	3.047	3.045	3.041
N-Nitroso-di-n-propylamine	1.614	1.566	1.498	1.585	1.571
Hexachloroethane	0.756	0.778	0.805	0.782	0.796
Nitrobenzene	0.469	0.464	0.459	0.466	0.461
Isophorone	1.050	1.038	1.008	1.041	1.032
bis(2-Chloroethoxy)methane	0.529	0.524	0.504	0.518	0.515
1,2,4-Trichlorobenzene	0.268	0.273	0.274	0.278	0.277
Naphthalene	1.184	1.162	1.141	1.149	1.150
4-Chloroaniline	0.455	0.463	0.463	0.481	0.482
Hexachlorobutadiene	0.156	0.157	0.157	0.159	0.164
2-Methylnaphthalene	0.618	0.642	0.635	0.641	0.643
Hexachlorocyclopentadiene	0.196	0.218	0.294	0.294	0.323
2-Chloronaphthalene	1.153	1.204	1.191	1.194	1.186
2-Nitroaniline	0.548	0.573	0.533	0.511	0.493
Dimethylphthalate	1.408	1.418	1.363	1.443	1.403
Acenaphthylene	1.893	1.980	1.884	1.992	1.917
2,6-Dinitrotoluene	0.275	0.290	0.306	0.324	0.327
3-Nitroaniline	0.391	0.420	0.431	0.434	0.443
Acenaphthene	1.138	1.224	1.231	1.267	1.246

SEMICVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 8270B

Instrument ID: BNAMS3

Calibration Date(s): 06/02/97 06/02/97

Calibration Time(s): 1233 1623

LAB FILE ID:	RRF10: T1203 RRF80: T1201	RRF20: T1202 RRF120: T1200	RRF50: T1198		
COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF120
Dibenzofuran	1.602	1.618	1.630	1.658	1.638
2,4-Dinitrotoluene	0.350	0.376	0.400	0.422	0.424
Diethylphthalate	1.502	1.523	1.490	1.525	1.541
4-Chlorophenyl-phenylether	0.635	0.646	0.629	0.675	0.670
Fluorene	1.354	1.313	1.307	1.321	1.298
4-Nitroaniline	0.411	0.426	0.439	0.449	0.442
N-Nitrosodiphenylamine	0.533	0.515	0.515	0.516	0.510
4-Bromophenyl-phenylether	0.205	0.198	0.203	0.202	0.205
Hexachlorobenzene	0.207	0.208	0.203	0.207	0.208
Phenanthrene	1.091	1.014	1.036	0.987	0.999
Anthracene	1.198	1.027	1.021	1.010	0.985
Carbazole	1.049	1.036	0.989	0.957	0.945
Di-n-butylphthalate	1.657	1.640	1.585	1.559	1.557
Fluoranthene	1.462	1.226	1.187	1.192	1.196
Pyrene	1.708	1.481	1.496	1.475	1.470
Benzidine	0.432	0.429	0.402	0.253	0.220
Butylbenzylphthalate	0.897	0.895	0.901	0.890	0.890
3,3'-Dichlorobenzidine	0.453	0.494	0.498	0.525	0.514
Benzo(a)anthracene	1.824	1.326	1.325	1.329	1.342
Chrysene	1.502	1.222	1.228	1.237	1.260
bis(2-Ethylhexyl)phthalate	1.286	1.261	1.274	1.276	1.278
Di-n-octylphthalate	2.219	2.205	2.138	2.260	2.272
Benzo(b)fluoranthene	1.260	1.171	1.188	1.277	1.299
Benzo(k)fluoranthene	1.379	1.235	1.232	1.268	1.278
Benzo(a)pyrene	1.126	1.102	1.114	1.146	1.154
Indeno(1,2,3-cd)pyrene	1.066	0.952	0.940	1.034	1.104
Dibenz(a,h)anthracene	0.799	0.934	0.904	0.993	1.015
Benzo(g,h,i)perylene	0.883	1.060	0.992	1.073	1.094
Pyridine	2.352	2.242	2.487	2.432	2.354
Aniline	2.940	2.773	2.852	2.646	2.681
Benzyl Alcohol	1.226	1.259	1.262	1.308	1.357
1,2-Diphenylhydrazine	1.331	1.268	1.202	1.142	1.114
Diphenyl	1.507	1.531	1.532	1.547	1.578
Diphenyl Ether	0.762	0.780	0.762	0.783	0.790
2-Fluorophenol (SUR)	2.006	1.929	2.037	2.019	2.082
Phenol-d5 (SUR)	2.406	2.259	2.351	2.381	2.408
2,4,6-Tribromophenol (SUR)	0.156	0.196	0.192	0.203	0.207
Nitrobenzene-d5 (SUR)	0.483	0.468	0.490	0.489	0.486

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 8270B

Instrument ID: BNAMS3

Calibration Date(s): 06/02/97 06/02/97

Calibration Time(s): 1233 1623

LAB FILE ID:	RRF10: T1203 RRF80: T1201	RRF20: T1202 RRF120: T1200	RRF50: T1198		
COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF120
2-Fluorobiphenyl (SUR) _____	1.362	1.368	1.363	1.372	1.361
Terphenyl-d14 (SUR) _____	0.975	0.938	0.992	0.981	0.976

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 8270B

Instrument ID: BNAMS3

Calibration Date(s): 06/02/97 06/02/97

Calibration Time(s): 1233 1623

COMPOUND	CURVE	A0	COEFFICIENTS A1	A2	%RSD OR R^2
Phenol	AVRG		2.44931786		2.8*
2-Chlorophenol	AVRG		1.75745586		4.1*
2-Methylphenol	AVRG		1.68698485		1.1*
4-Methylphenol	AVRG		1.79734126		3.8*
2-Nitrophenol	AVRG		0.20710480		3.7*
2,4-Dimethylphenol	AVRG		0.37758159		1.8*
2,4-Dichlorophenol	AVRG		0.24498605		5.8*
4-Chloro-3-methylphenol	AVRG		0.33385889		2.5*
2,4,6-Trichlorophenol	AVRG		0.38941461		4.6*
2,4,5-Trichlorophenol	AVRG		0.40122820		9.6*
2,4-Dinitrophenol	2ORDR	0.00000000	10.6364529	-9.0986070	0.994** 31.5
4-Nitrophenol	AVRG		0.32644698		4.9**
4,6-Dinitro-2-methylphenol	2ORDR	0.00000000	9.47643452	-5.7350380	0.997* 18.9
Pentachlorophenol	AVRG		0.14406678		5.1*
Benzoic Acid	2ORDR	0.00000000	4.47263097	1.07952662	0.963* 22.9
N-Nitrosodimethylamine	AVRG		1.48798313		5.6*
bis(2-Chloroethyl)ether	AVRG		1.89488061		2.3*
1,3-Dichlorobenzene	AVRG		1.64533007		1.4*
1,4-Dichlorobenzene	AVRG		1.67671229		1.0*
1,2-Dichlorobenzene	AVRG		1.54157216		1.2*
bis(2-chloroisopropyl)ether	AVRG		3.11197143		3.8*
N-Nitroso-di-n-propylamine	AVRG		1.56668733		2.7**
Hexachloroethane	AVRG		0.78368756		2.4*
Nitrobenzene	AVRG		0.46379388		0.9*
Isophorone	AVRG		1.03382757		1.6*
bis(2-Chloroethoxy)methane	AVRG		0.51798057		1.8*
1,2,4-Trichlorobenzene	AVRG		0.27423828		1.4*
Naphthalene	AVRG		1.15735703		1.4*
4-Chloroaniline	AVRG		0.46893517		2.6*
Hexachlorobutadiene	AVRG		0.15861655		1.9*
2-Methylnaphthalene	AVRG		0.63593363		1.6*
Hexachlorocyclopentadiene	2ORDR	0.00000000	3.84427985	-0.7786800	0.998** 20.7
2-Chloronaphthalene	AVRG		1.18573441		1.6*
2-Nitroaniline	AVRG		0.53171483		5.9*
Dimethylphthalate	AVRG		1.40703767		2.1*
Acenaphthylene	AVRG		1.93311647		2.6*
2,6-Dinitrotoluene	AVRG		0.30453266		7.4*
3-Nitroaniline	AVRG		0.42394624		4.8*
Acenaphthene	AVRG		1.22121721		4.0*

* Compound with required maximum % RSD value.

** Compound with required minimum RRF value.

SEMICVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 8270B

Instrument ID: BNAMS3

Calibration Date(s): 06/02/97 06/02/97

Calibration Time(s): 1233 1623

COMPOUND	CURVE	COEFFICIENTS			%RSD OR R^2
		A0	A1	A2	
Dibenzofuran	AVRG	1.62910325			1.3*
2,4-Dinitrotoluene	AVRG	0.39440730			8.0*
Diethylphthalate	AVRG	1.51633756			1.3*
4-Chlorophenyl-phenylether	AVRG	0.65105717			3.2*
Fluorene	AVRG	1.31878193			1.6*
4-Nitroaniline	AVRG	0.43360720			3.5*
N-Nitrosodiphenylamine	AVRG	0.51761035			1.7*
4-Bromophenyl-phenylether	AVRG	0.20247020			1.5*
Hexachlorobenzene	AVRG	0.20384983			1.0*
Phenanthrene	AVRG	1.02549183			4.0*
Anthracene	AVRG	1.04822743			8.2*
Carbazole	AVRG	0.99508036			4.6*
Di-n-butylphthalate	AVRG	1.59900783			2.9*
Fluoranthene	AVRG	1.25264822			9.4*
Pyrene	AVRG	1.52614117			6.7*
Benzidine	2ORDR	0.00000000	3.93915326	-0.9861243	0.625* 29.5
Butylbenzylphthalate	AVRG		0.89462036		0.5*
3,3'-Dichlorobenzidine	AVRG		0.49690123		5.5*
Benzo(a)anthracene	2ORDR	0.00000000	0.76198085	-0.0040734	1.000* 15.4
Chrysene	AVRG		1.28986505		9.3*
bis(2-Ethylhexyl)phthalate	AVRG		1.27526405		0.7*
Di-n-octylphthalate	AVRG		2.21879382		2.4*
Benzo(b)fluoranthene	AVRG		1.23900165		4.5*
Benzo(k)fluoranthene	AVRG		1.27865610		4.6*
Benzo(a)pyrene	AVRG		1.12822493		1.9*
Indeno(1,2,3-cd)pyrene	AVRG		1.01944335		7.0*
Dibenz(a,h)anthracene	AVRG		0.92911651		9.2*
Benzo(g,h,i)perylene	AVRG		1.02049066		8.4*
Pyridine	AVRG		2.37344631		3.9*
Aniline	AVRG		2.77844027		4.4*
Benzyl Alcohol	AVRG		1.28238053		4.0*
1,2-Diphenylhydrazine	AVRG		1.21164378		7.4*
Diphenyl	AVRG		1.53915023		1.7*
Diphenyl Ether	AVRG		0.77545327		1.7*
2-Fluorophenol (SUR)	AVRG	2.01456213			2.8*
Phenol-d5 (SUR)	AVRG	2.36099952			2.6*
2,4,6-Tribromophenol (SUR)	AVRG	0.19102015			10.6*
Nitrobenzene-d5 (SUR)	AVRG	0.48320637			1.8*

* Compound with required maximum % RSD value.

** Compound with required minimum RRF value.

SEMOVOLATILE ORGANICS INITIAL CALIBRATION DATA (cont'd)
METHOD 8270B

Instrument ID: BNAMS3 Calibration Date(s): 06/02/97 06/02/97
 Calibration Time(s): 1233 1623

COMPOUND	CURVE	A0	COEFFICIENTS		%RSD OR R^2
			A1	A2	
2-Fluorobiphenyl (SUR)	AVRG		1.36538170		0.3*
Terphenyl-d14 (SUR)	AVRG		0.97248696		2.1*

* Compound with required maximum % RSD value.

** Compound with required minimum RRF value.

SEMITOLATILE ORGANICS CONTINUING CALIBRATION CHECK
METHOD 8270B

Instrument ID: BNAMS3

Calibration Date: 06/19/97 Time: 1951

Lab File ID: T1497

Init. Calib. Date(s): 06/02/97 06/02/97

Init. Calib. Times: 1233 1623

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
Phenol	51	50	AVRG	-2.0	20.0
2-Chlorophenol	49	50	AVRG	2.0	50.0
2-Methylphenol	51	50	AVRG	-2.0	50.0
4-Methylphenol	51	50	AVRG	-2.0	50.0
2-Nitrophenol	49	50	AVRG	2.0	20.0
2,4-Dimethylphenol	48	50	AVRG	4.0	50.0
2,4-Dichlorophenol	48	50	AVRG	4.0	20.0
4-Chloro-3-methylphenol	51	50	AVRG	-2.0	20.0
2,4,6-Trichlorophenol	47	50	AVRG	6.0	20.0
2,4,5-Trichlorophenol	50	50	AVRG	0.0	50.0
2,4-Dinitrophenol	86	80	2ORDR	-7.5	50.0
4-Nitrophenol	74	80	AVRG	7.5	50.0
4,6-Dinitro-2-methylphenol	92	80	2ORDR	-15.0	50.0
Pentachlorophenol	70	80	AVRG	12.5	20.0
Benzoic Acid	37	50	2ORDR	26.0	50.0
N-Nitrosodimethylamine	56	50	AVRG	-12.0	50.0
bis(2-Chloroethyl)ether	50	50	AVRG	0.0	50.0
1,3-Dichlorobenzene	51	50	AVRG	-2.0	50.0
1,4-Dichlorobenzene	51	50	AVRG	-2.0	20.0
1,2-Dichlorobenzene	51	50	AVRG	-2.0	50.0
bis(2-chloroisopropyl)ether	49	50	AVRG	2.0	50.0
N-Nitroso-di-n-propylamine	51	50	AVRG	-2.0	50.0
Hexachloroethane	50	50	AVRG	0.0	50.0
Nitrobenzene	53	50	AVRG	-6.0	50.0
Isophorone	50	50	AVRG	0.0	50.0
bis(2-Chloroethoxy)methane	49	50	AVRG	2.0	50.0
1,2,4-Trichlorobenzene	48	50	AVRG	4.0	50.0
Naphthalene	47	50	AVRG	6.0	50.0
4-Chloroaniline	49	50	AVRG	2.0	50.0
Hexachlorobutadiene	47	50	AVRG	6.0	20.0
2-Methylnaphthalene	50	50	AVRG	0.0	50.0
Hexachlorocyclopentadiene	35	50	2ORDR	30.0	50.0
2-Chloronaphthalene	49	50	AVRG	2.0	50.0
2-Nitroaniline	50	50	AVRG	0.0	50.0
Dimethylphthalate	49	50	AVRG	2.0	50.0
Acenaphthylene	50	50	AVRG	0.0	50.0
2,6-Dinitrotoluene	53	50	AVRG	-6.0	50.0

SEMOVOLATILE ORGANICS CONTINUING CALIBRATION CHECK (cont'd)
METHOD 8270B

Instrument ID: BNAMS3

Calibration Date: 06/19/97 Time: 1951

Lab File ID: T1497

Init. Calib. Date(s): 06/02/97 06/02/97

Init. Calib. Times: 1233 1623

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
3-Nitroaniline	48	50	AVRG	4.0	50.0
Acenaphthene	49	50	AVRG	2.0	20.0
Dibenzofuran	49	50	AVRG	2.0	50.0
2,4-Dinitrotoluene	54	50	AVRG	-8.0	50.0
Diethylphthalate	47	50	AVRG	6.0	50.0
4-Chlorophenyl-phenylether	49	50	AVRG	2.0	50.0
Fluorene	46	50	AVRG	8.0	50.0
4-Nitroaniline	47	50	AVRG	6.0	50.0
N-Nitrosodiphenylamine	50	50	AVRG	0.0	20.0
4-Bromophenyl-phenylether	51	50	AVRG	-2.0	50.0
Hexachlorobenzene	50	50	AVRG	0.0	50.0
Phenanthrene	52	50	AVRG	-4.0	50.0
Anthracene	49	50	AVRG	2.0	50.0
Carbazole	49	50	AVRG	2.0	50.0
Di-n-butylphthalate	51	50	AVRG	-2.0	50.0
Fluoranthene	48	50	AVRG	4.0	20.0
Pyrene	51	50	AVRG	-2.0	50.0
Benzidine	72	80	2ORDR	10.0	50.0
Butylbenzylphthalate	52	50	AVRG	-4.0	50.0
3,3'-Dichlorobenzidine	83	80	AVRG	-3.6	50.0
Benzo(a)anthracene	50	50	2ORDR	0.0	50.0
Chrysene	49	50	AVRG	2.0	50.0
bis(2-Ethylhexyl)phthalate	53	50	AVRG	-6.0	50.0
Di-n-octylphthalate	54	50	AVRG	-8.0	20.0
Benzo(b)fluoranthene	49	50	AVRG	2.0	50.0
Benzo(k)fluoranthene	48	50	AVRG	4.0	50.0
Benzo(a)pyrene	50	50	AVRG	0.0	20.0
Indeno(1,2,3-cd)pyrene	50	50	AVRG	0.0	50.0
Dibenz(a,h)anthracene	51	50	AVRG	-2.0	50.0
Benzo(g,h,i)perylene	52	50	AVRG	-4.0	50.0
Pyridine	51	50	AVRG	-2.0	50.0
Aniline	50	50	AVRG	0.0	50.0
Benzyl Alcohol	52	50	AVRG	-4.0	50.0
1,2-Diphenylhydrazine	55	50	AVRG	-10.0	50.0
Diphenyl	50	50	AVRG	0.0	50.0
Diphenyl Ether	47	50	AVRG	6.0	50.0

SEMIVOLATILE ORGANICS CONTINUING CALIBRATION CHECK (cont'd)
METHOD 8270B

Instrument ID: BNAMS3

Calibration Date: 06/19/97 Time: 1951

Lab File ID: T1497

Init. Calib. Date(s): 06/02/97 06/02/97

Init. Calib. Times: 1233 1623

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
2-Fluorophenol (SUR) _____	50	50	AVRG	0.0	50.0
Phenol-d5 (SUR) _____	51	50	AVRG	-2.0	50.0
2,4,6-Tribromophenol (SUR) _____	44	50	AVRG	12.0	50.0
Nitrobenzene-d5 (SUR) _____	50	50	AVRG	0.0	50.0
2-Fluorobiphenyl (SUR) _____	46	50	AVRG	8.0	50.0
Terphenyl-d14 (SUR) _____	51	50	AVRG	-2.0	50.0

VOLATILE SYSTEM MONITORING COMPOUND RECOVERY
METHOD 8240B

Matrix: SOIL

Level: HIGH

Lab Job No: V393

	LAB SAMPLE NO.	S1 #	S2 #	S3 #	OTHER	TOT OUT
01	CV164B	96	103	90		0
02	96866	81	88	91		0
03	96867	84	87	87		0
04						
05						
06						
07						
08						
09						
10						
11						
12					*	
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

QC LIMITS

S1	= 1,2-Dichloroethane-d4	(70-121)
S2	= Toluene-d8	(81-117)
S3	= Bromofluorobenzene	(74-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

VOLATILE SYSTEM MONITORING COMPOUND RECOVERY
METHOD 8240B

Matrix: SOIL

Level: LOW

Lab Job No: V393

	LAB SAMPLE NO.	S1 #	S2 #	S3 #	OTHER	TOT OUT
01	AV164	94	98	93	_____	0
02	96868	101	96	93	_____	0
03	96869	105	98	95	_____	0
04	96870	105	96	96	_____	0
05	96871	100	94	93	_____	0
06	96872	103	98	94	_____	0
07	96873	106	100	94	_____	0
08	_____	_____	_____	_____	_____	_____
09	_____	_____	_____	_____	_____	_____
10	_____	_____	_____	_____	_____	_____
11	_____	_____	_____	_____	_____	_____
12	_____	_____	_____	_____	_____	_____
13	_____	_____	_____	_____	_____	_____
14	_____	_____	_____	_____	_____	_____
15	_____	_____	_____	_____	_____	_____
16	_____	_____	_____	_____	_____	_____
17	_____	_____	_____	_____	_____	_____
18	_____	_____	_____	_____	_____	_____
19	_____	_____	_____	_____	_____	_____
20	_____	_____	_____	_____	_____	_____
21	_____	_____	_____	_____	_____	_____
22	_____	_____	_____	_____	_____	_____
23	_____	_____	_____	_____	_____	_____
24	_____	_____	_____	_____	_____	_____
25	_____	_____	_____	_____	_____	_____
26	_____	_____	_____	_____	_____	_____
27	_____	_____	_____	_____	_____	_____
28	_____	_____	_____	_____	_____	_____
29	_____	_____	_____	_____	_____	_____
30	_____	_____	_____	_____	_____	_____

QC LIMITS

S1	= 1,2-Dichloroethane-d4	(70-121)
S2	= Toluene-d8	(81-117)
S3	= Bromofluorobenzene	(74-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

SEMI-VOLATILE SURROGATE RECOVERY
METHOD 8270B

Matrix: SOIL

Level: LOW

Lab Job No: V393

LAB SAMPLE NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
01 SB167	80	90	69	90	88	94	0
02 96866				75	84	87	0
03 96870				82	90	97	0
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

QC LIMITS

S1	= 2-Fluorophenol	(25-121)
S2	= Phenol-d5	(24-113)
S3	= 2,4,6-Tribromophenol	(19-122)
S4	= Nitrobenzene-d5	(23-120)
S5	= 2-Fluorobiphenyl	(30-115)
S6	= Terphenyl-d14	(18-137)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY
METHOD 8240B

Matrix: SOIL

Matrix Spike - Lab Sample No.: 95806

Level: HIGH

MS Sample from Lab Job No: V222

QA Batch: 4420

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	7500	0.00	7000	93	59-172
Trichloroethene	7500	0.00	6800	91	62-137
Benzene	7500	0.00	6900	92	66-142
Toluene	7500	0.00	7000	93	59-139
Chlorobenzene	7500	0.00	6800	91	60-133

Compound	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	7500	7300	97	4	22	59-172
Trichloroethene	7500	7200	96	6	24	62-137
Benzene	7500	7300	97	6	21	66-142
Toluene	7500	7400	99	6	21	59-139
Chlorobenzene	7500	7200	96	6	21	60-133

Column to be used to flag recovery and RPD values with an asterik

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

SEMI-VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY
METHOD 8270B

Matrix: SOIL

Matrix Spike - Lab Sample No.: 95445

Level: LOW

MS Sample from Lab Job No: V175

QA Batch: 3444

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Phenol	7100	0.00	5400	76	26-90
2-Chlorophenol	7100	0.00	5900	83	25-102
4-Chloro-3-methylphenol	7100	0.00	6400	90	26-103
4-Nitrophenol	7100	0.00	5700	80	11-114
Pentachlorophenol	7100	0.00	3500	49	17-109
1,4-Dichlorobenzene	3500	0.00	1400	40	28-104
N-Nitroso-di-n-propylami	3500	0.00	3100	89	41-126
1,2,4-Trichlorobenzene	3500	0.00	2000	57	38-107
Acenaphthene	3500	0.00	2800	80	31-137
2,4-Dinitrotoluene	3500	0.00	2800	80	28-89
Pyrene	3500	0.00	3300	94	35-142

Compound	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
Phenol	7100	5900	83	9	35	26-90
2-Chlorophenol	7100	6200	87	5	50	25-102
4-Chloro-3-methylphenol	7100	6500	92	2	33	26-103
4-Nitrophenol	7100	5600	79	2	50	11-114
Pentachlorophenol	7100	3300	46	6	47	17-109
1,4-Dichlorobenzene	3500	1500	43	7	27	28-104
N-Nitroso-di-n-propylami	3500	3200	91	3	38	41-126
1,2,4-Trichlorobenzene	3500	2000	57	0	23	38-107
Acenaphthene	3500	2900	83	4	19	31-137
2,4-Dinitrotoluene	3500	2700	77	4	47	28-89
Pyrene	3500	3100	89	6	36	35-142

Column to be used to flag recovery and RPD values with an asterik

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

COMMENTS:

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A9457

Date Analyzed: 06/13/97

Instrument ID: VOAMS1

Time Analyzed: 0928

	IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
12 HOUR STD	912925	8.97	4264177	10.27	3117668	13.83
UPPER LIMIT	1825850	9.47	8528354	10.77	6235336	14.33
LOWER LIMIT	456462	8.47	2132088	9.77	1558834	13.33
LABORATORY SAMPLE NO.						
01 AV164	679790	8.97	3285398	10.27	2361548	13.84
02 96868	781827	8.97	3631954	10.27	2618997	13.83
03 96869	547343	9.01	2388010	10.30	1702327	13.84
04 96870	731445	9.00	3181190	10.30	2156786	13.84
05 96871	819544	9.01	3684743	10.30	2549850	13.83
06 96872	860313	9.01	3806634	10.30	2717206	13.84
07 96873	546458	9.01	2327431	10.30	1728594	13.84
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C3057

Date Analyzed: 06/13/97

Instrument ID: VOAMS3

Time Analyzed: 0844

	IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
12 HOUR STD	833775	8.97	3420194	10.26	2504705	13.84
UPPER LIMIT	1667550	9.47	6840388	10.76	5009410	14.34
LOWER LIMIT	416888	8.47	1710097	9.76	1252352	13.34
LABORATORY SAMPLE NO.						
01 CV164B	778516	9.02	3185999	10.30	2371723	13.87
02 96866	1002523	8.94	4237821	10.23	3112227	13.83
03 96867	966782	8.98	4055479	10.26	2997767	13.85
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

SEMI-VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard) : T1497

Date Analyzed: 06/19/97

Instrument ID: BNAMS3

Time Analyzed: 1951

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (CRY) AREA #	RT #
12 HOUR STD	146302	12.84	637335	15.04	327802	24.80
UPPER LIMIT	292604	13.34	1274670	15.54	655604	25.30
LOWER LIMIT	73151	12.34	318668	14.54	163901	24.30
LABORATORY SAMPLE NO.						
01 SB167	118218	12.85	539697	15.03	307106	24.78
02 96866	126473	12.85	544352	15.03	274270	24.79
03 96870	123584	12.85	545953	15.03	261749	24.79
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (CRY) = Chrysene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

SEMITVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): T1497

Date Analyzed: 06/19/97

Instrument ID: BNAMS3

Time Analyzed: 1951

	IS4 (ANT) AREA #	RT #	IS5 (PHN) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	277354	17.95	431643	20.41	325290	28.11
UPPER LIMIT	554708	18.45	863286	20.91	650580	28.61
LOWER LIMIT	138677	17.45	215822	19.91	162645	27.61
LABORATORY SAMPLE NO.						
01 SB167	232336	17.95	353028	20.41	285019	28.10
02 96866	223366	17.95	335352	20.41	269877	28.12
03 96870	212553	17.96	323273	20.41	255778	28.13
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (ANT) = Acenaphthene-d10

IS5 (PHN) = Phenanthrene-d10

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

Site: Ortho Diagnostics

Lab Job No: V393

Date Sampled: 6/11/97

Date Extracted: 6/13/97

Date Received: 6/12/97

Date Analyzed: 6/13/97

Matrix: SOIL

QA Batch: 3859

TOTAL PETROLEUM HYDROCARBONS (418.1)

<u>Envirotech Sample #</u>	<u>Client ID</u>	<u>% Moisture</u>	<u>Dilution Factor</u>	<u>Analytical Result mg/kg (Dry Wt.)</u>
96866	PX-1	10.4	5.0	2020
96867	PX-2	11.0	1.0	396
96868	PX-3	10.3	1.0	ND
96869	PX-4	14.9	1.0	121
96870	PX-5	11.8	1.0	653
96871	PX-6	10.8	1.0	ND
96872	PX-7	10.5	1.0	ND
96873	PX-8	11.5	1.0	ND

Quantitation Limit for Total Petroleum Hydrocarbons (418.1) is 25.0 mg/kg for an undiluted sample.

PETROLEUM HYDROCARBONS

Matrix: SOLID

Lab Sample No.: 97189

QA Batch No.: 3859

Lab Job No.: V434

Laboratory Blank	
Blank Conc Units: mg/kg	Quant Limit Units: mg/kg
ND	25.0

Matrix Spike				
Spike Added Units: mg/kg	Sample Conc Units: mg/kg	MS Conc Units: mg/kg	MS % Rec	QC Limits Rec
597.0	84.9	583.0	83.4	74.5-118

Matrix Spike Duplicate					
Spike Added Units: mg/kg	MSD Conc Units: mg/kg	MSD % Rec	% RPD	QC LIMITS	
				RPD	REC
597.0	618.0	89.3	5.8	10.8	74.5-118

SPIKE ADDED CONCENTRATION is adjusted for % Solids

Blank Spike		
Spike Conc Units: mg/kg	BS Conc Units: mg/kg	% Rec
526.0	484.0	92.0

* Envirotech Research, Inc.
*

* Test Method for
* Oil and Grease and Petroleum Hydrocarbons
* in Water and Soil
*

Perkin-Elmer Model 1600 FT-IR
Analysis Report

* 97/06/13 15:34
*

* Sample identification
96866

* Initial mass of sample, g
30.000

* Volume of sample after extraction, ml
100.000

* dilution factor, 1 = no dilution
5.000

* percent solids, 100% = dry soil or water sample
89.600

* Petroleum hydrocarbons, ppm
2024.173

* Net absorbance of hydrocarbons (2930 cm⁻¹)
0.210

1. Infrared hydrocarbons spectrum

15:34

3800

3000

2800

cm⁻¹

* Envirotech Research, Inc. *
*

* Test Method for
* Oil and Grease and Petroleum Hydrocarbons
* in Water and Soil
*

* Perkin-Elmer Model 1600 FT-IR
* Analysis Report

* 97/06/13 15:35

* Sample identification
96867

* Initial mass of sample, g
30.000

* Volume of sample after extraction, ml
100.000

* dilution factor, 1 = no dilution
1.000

* percent solids, 100% = dry soil or water sample
89.000

* Petroleum hydrocarbons, ppm
396.181

* Net absorbance of hydrocarbons (2980 cm⁻¹)
0.204

3000 2800 2600 2400 2200 2000 1800 1600 1400 1200 1000 800 600 400 200

cm⁻¹

3200

3000

2800

cm⁻¹

* Envirotech Research, Inc.
*

* Test Method for
* Oil and Grease and Petroleum Hydrocarbons
* in Water and Soil
*

Perkin-Elmer Model 1600 FT-IR
Analysis Report

* 97/06/13 15:01
*

* Sample identification
96868

* Initial mass of sample, g
30.000

* Volume of sample after extraction, ml
100.000

* dilution factor, 1 = no dilution
1.000

* percent solids, 100% = dry soil or water sample
89.700

* Petroleum hydrocarbons, ppm
15.796

* Net absorbance of hydrocarbons (2930 cm⁻¹)
0.010

15.796 Petroleum hydrocarbons spectrum

15:01

3200

3000

2800

cm⁻¹

* Envirotech Research, Inc. *
*

* Test Method for
* Oil and Grease and Petroleum Hydrocarbons
* in Water and Soil
*

Perkin-Elmer Model 1600 FT-IR
Analysis Report

* 97/06/13 15:37
*

* Sample identification
96869

* Initial mass of sample, g
30.000

* Volume of sample after extraction, ml
100.000

* dilution factor, 1 = no dilution
1.000

* percent solids, 100% = dry soil or water sample
85.100

* Petroleum hydrocarbons, ppm

130.967

* Net absorbance of hydrocarbons (2930 cm⁻¹)
0.060

1. Spectrum of sample showing aromatic spectrum

17:17

3200

3000

2800

cm⁻¹

* Envirotech Research, Inc.
*
*

* Test Method for
* Oil and Grease and Petroleum Hydrocarbons
* in Water and Soil
*

* Perkin-Elmer Model 1600 FT-IR
* Analysis Report

* 97/06/13 15:38

* Sample identification
96870

* Initial mass of sample, g
30.000

* Volume of sample after extraction, ml
100.000

* dilution factor, 1 = no dilution
1.000

* percent solids, 100% = dry soil or water sample
88.200

* Petroleum hydrocarbons, ppm
553.200

* Net absorbance of hydrocarbons (2930 cm⁻¹)
0.332

15:38

3200

3000

2800

cm⁻¹

* Envirotech Research, Inc.
*

* Test Method for
* Oil and Grease and Petroleum Hydrocarbons
* in Water and Soil
*

* Perkin-Elmer Model 1600 FT-IR
* Analysis Report

* 97/06/13 15:05

* Sample identification
96871

* Initial mass of sample, g
30.000

* Volume of sample after extraction, ml
100.000

* dilution factor, 1 = no dilution
1.000

* percent solids, 100% = dry soil or water sample
89.200

* Petroleum hydrocarbons, ppm

7.942

* Net absorbance of hydrocarbons (2930 cm⁻¹)

0.006

** Petroleum hydrocarbons spectrum

15:05

3200

3000

2800

cm⁻¹

* Envirotech Research, Inc. *
*

* Test Method for
* Oil and Grease and Petroleum Hydrocarbons
* in Water and Soil

* Perkin-Elmer Model 1600 FT-IR
* Analysis Report

* 97/06/13 15:06

* Sample identification
96872

* Initial mass of sample, g
30.000

* Volume of sample after extraction, ml
100.000

* dilution factor, 1 = no dilution
1.000

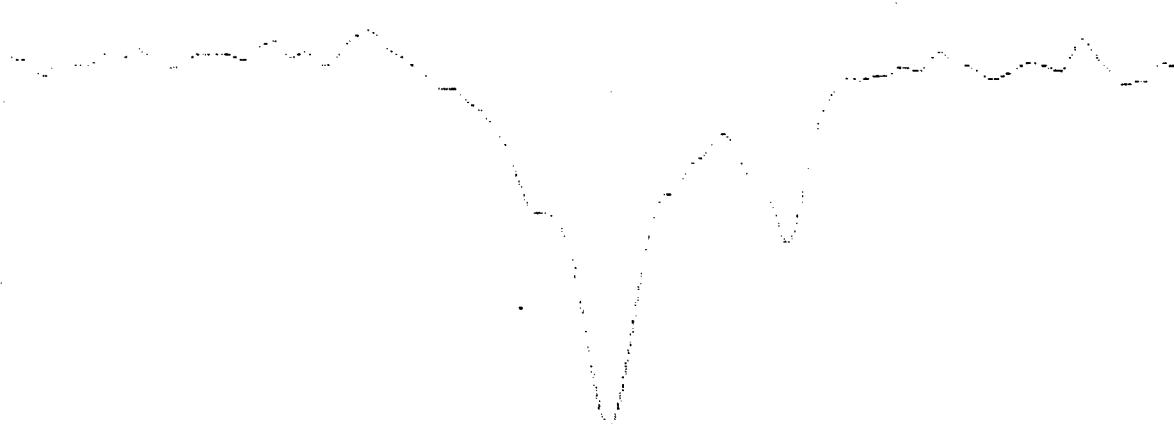
* percent solids, 100% = dry soil or water sample
89.500

* Petroleum hydrocarbons, ppm
5.156

* Net absorbance of hydrocarbons (2930 cm⁻¹)
0.005

1) Petroleum hydrocarbons spectrum

15:07



3000

2800

2600

cm⁻¹

* Envirotech Research, Inc.
*

* Test Method for
* Oil and Grease and Petroleum Hydrocarbons
* in Water and Soil
*

* Perkin-Elmer Model 1600 FT-IR
* Analysis Report

* 97/06/13 15:08

* Sample identification
96873

* Initial mass of sample, g
30.000

* Volume of sample after extraction, ml
100.000

* dilution factor, 1 = no dilution
1.000

* percent solids, 100% = dry soil or water sample
88.500

* Petroleum hydrocarbons, ppm

8.280

* Net absorbance of hydrocarbons (2930 cm⁻¹)
0.006

Perkin-Elmer FT-IR Spectrum

15:08

3200

3000

2800

cm⁻¹

* Envirotech Research, Inc.
*

* Test Method for
* Oil and Grease and Petroleum Hydrocarbons
* in Water and Soil

* Perkin-Elmer Model 1600 FT-IR
* Analysis Report

* 97/06/13 14:55

* Sample identification
06/13/97 PBS

* Initial mass of sample, g
30.000

* Volume of sample after extraction, ml
100.000

* dilution factor, 1 = no dilution
1.000

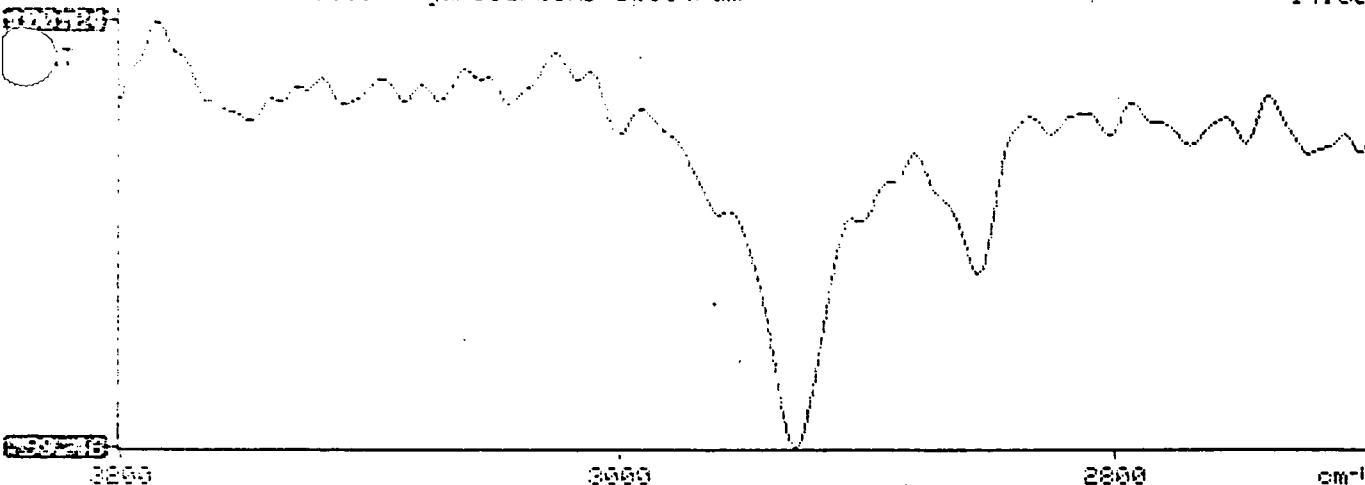
* percent solids, 100% = dry soil or water sample
100.000

* Petroleum hydrocarbons, ppm
1.984

* Net absorbance of hydrocarbons (2930 cm⁻¹)
0.003

7: Petroleum hydrocarbons spectrum

14:55



* Envirotech Research, Inc. *
*

* Test Method for
* Oil and Grease and Petroleum Hydrocarbons
* in Water and Soil
*

* Perkin-Elmer Model 1600 FT-IR
* Calibration Standards Spectra

* 97/06/13 09:57
*

* Concentration of standard, mg/100 ml.
* 40.640

* Net absorbance of standard
* 0.776

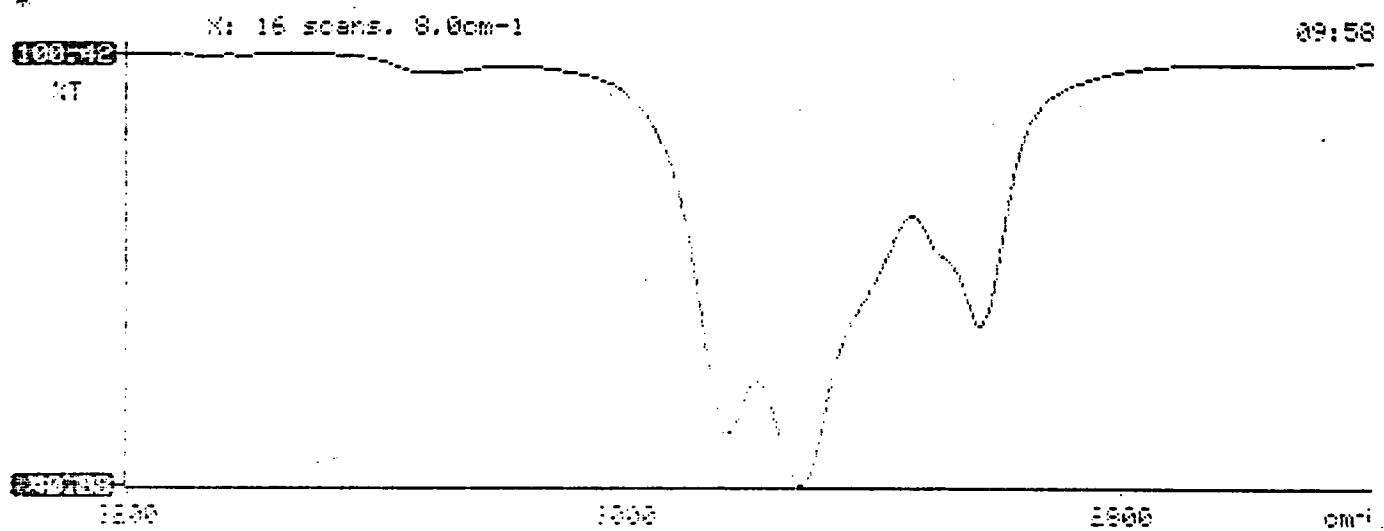
10 scans, 1.0cm⁻¹

09:57

3333.66 3200 3000 2800 cm⁻¹

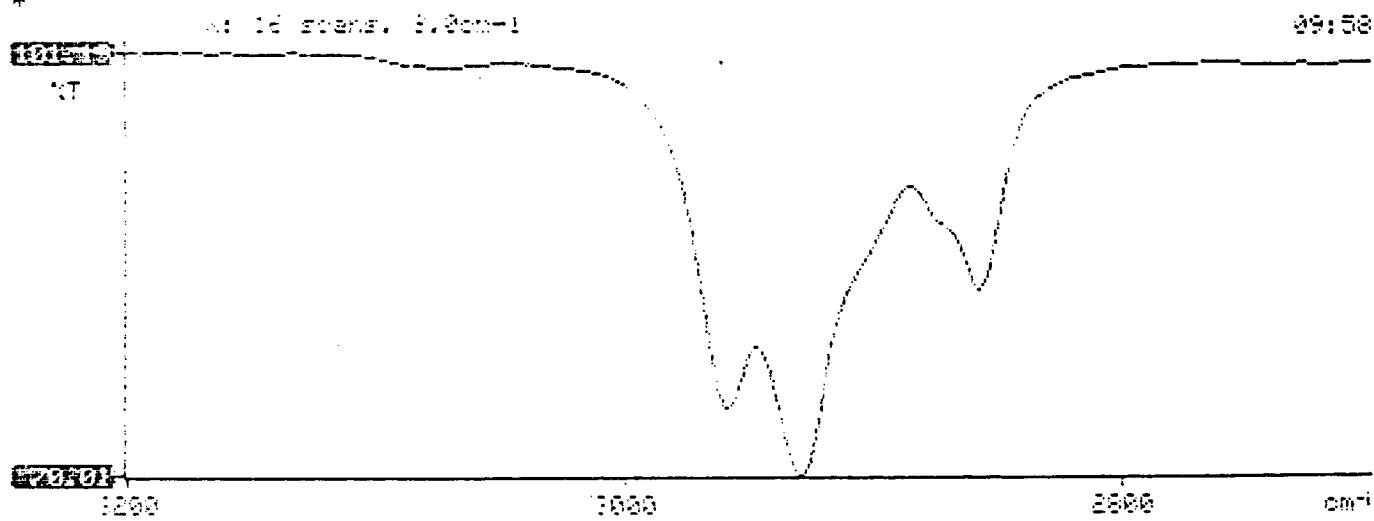
*
* Concentration of standard, mg/100 ml
20.320
*

Net absorbance of standard
0.393
*
*
*



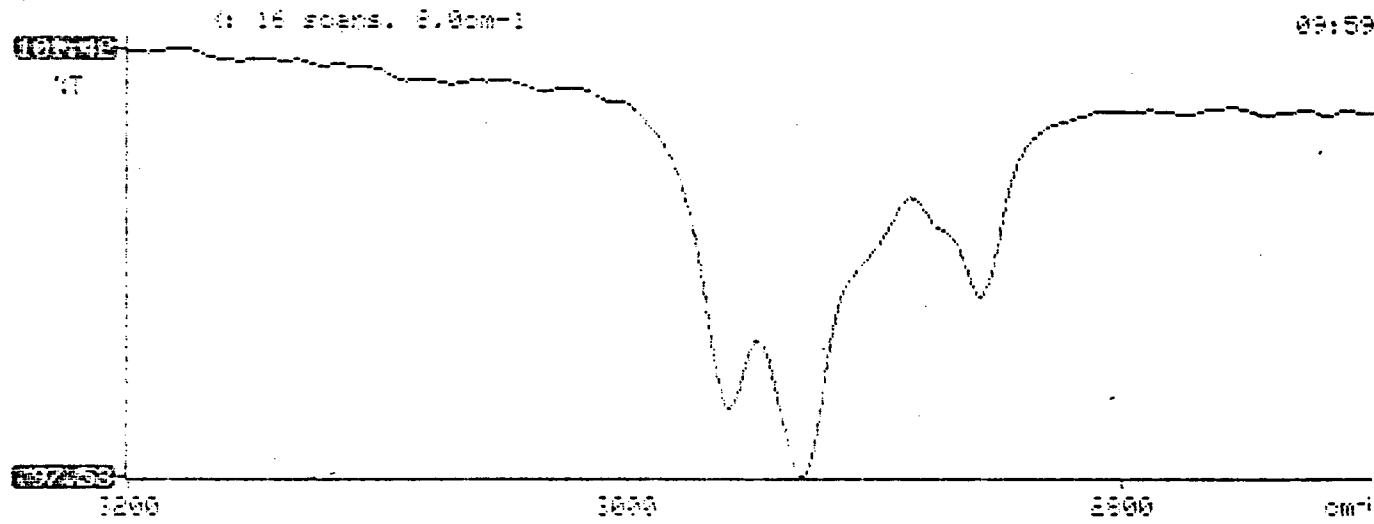
*
* Concentration of standard, mg/100 ml
0.124
*

* Net absorbance of standard
0.159
*
*
*



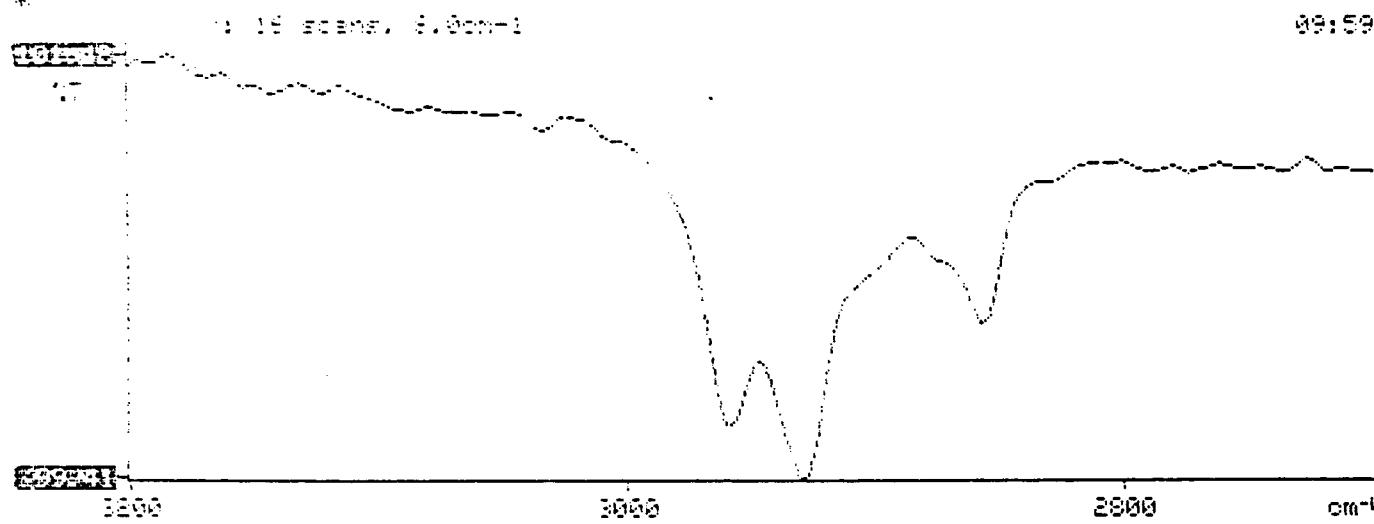
* Concentration of standard, mg/100 ml
0.812

* Net absorbance of standard
.016



* Concentration of standard, mg/100 ml
.406

* Net absorbance of standard
0.007



* Envirotech Research. Inc.
*

* Test Method for
* Oil and Grease and Petroleum Hydrocarbons
* in Water and Soil

* Perkin-Elmer Model 1600 FT-IR
* Calibration Report

* 97/06/13 09:57
*

* Concentrations of standards, mg/100 ml

40.640
20.320
8.124
0.812
0.406

* Net absorbance of standards

0.776
0.393
0.159
0.016
0.007

LST: slope 0.619; y-intercept 0.001; correlation 0.9997

